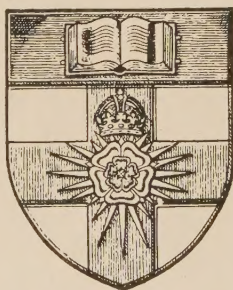


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President of The Surveyors' Institution, 1888-9 and 1889-90.

THE
SURVEYORS' INSTITUTION

(Incorporated by Royal Charter),

12, GREAT GEORGE STREET, WESTMINSTER, S.W.

TRANSACTIONS.

VOL. XLIII.

SESSION 1910-1911.



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The Surveyors' Institution

(INCORPORATED BY ROYAL CHARTER),
12, GREAT GEORGE STREET,
WESTMINSTER, S.W.

OFFICERS, 1910-1911.

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HERBERT THOMAS STEWARD (London)	

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PERCIVALL CURREY.

Secretary.

ALEXANDER GODDARD.

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Composed of Members of Council and Provincial Chairmen.

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COUNCIL SELECTION.
COUNTY DISTRICTS AND COUNTRY
MEETINGS.
DINNER.
EDUCATION.
ELECTIONS.

FINANCE.
FORESTRY.
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PARLIAMENTARY BILLS AND
GENERAL PURPOSES.
PROFESSIONAL PRACTICE.
QUANTITY SURVEYORS.

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1870 *Richard Hall*
1872 *Edward Norton Clifton*
1874 *Thomas Huskinson*
1876 *Edmund James Smith*
1878 *William Sturge*
1880 *Edward Ryde*
1883 *Thomas Smith-Woolley*
1885 *Edward P'Anson*
1886 *William James Beadel, M.P.*
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1890 *Robert Collier Driver*
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1906 GEORGE LANGRIDGE
1907 THOMAS TAYLOR WAINWRIGHT
1908 HOWARD MARTIN
1909 SIR ALEXANDER ROSE
STENNING.

(The names of those deceased are printed in italics.)

The Surveyors' Institution

(INCORPORATED BY ROYAL CHARTER)

Is established—

1. To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a Surveyor, viz.—the art of determining the value of all descriptions of landed and house property, and of the various interests therein; the practice of managing and developing estates; and the science of ad-measuring and delineating the physical features of the earth, and of measuring and estimating artificers' work.
2. To promote the general interests of the profession, and to maintain and extend its usefulness for the public advantage.

THE INSTITUTION was established in 1868, was incorporated by Royal Charter in 1881, and has a total membership of over 4,000.

THE INSTITUTION consists of four classes, viz.—FELLOWS, PROFESSIONAL ASSOCIATES, ASSOCIATES, and HONORARY MEMBERS, with a class of STUDENTS attached.

A FELLOW must be more than twenty-five years of age, and must have held a responsible position for at least five years and have acquired practical knowledge of surveying in one or other of its branches as above defined. He must also have passed the Final Examination declared in the Rules of Examination to appertain to the class of Fellows, or certain Government Examination in the United Kingdom or the Colonies which the Council may declare to be equivalent thereto.* A Fellow has the right, conferred by the Charter, to use the letters F.S.I. after his name. A Fellow has also the right, under By-Laws allowed by H.M. Privy Council, to describe himself as "Chartered Surveyor."

* *The Council possess only a very limited dispensing power as regards the Examinations.*

A PROFESSIONAL ASSOCIATE must be more than twenty-one years of age, a Surveyor by profession, in practice on his own account or employed as an Assistant in a Surveyor's Office, and qualified for the class by having passed the Intermediate Examination.* A Professional Associate has the right, conferred by the Charter, to use the letters P.A.S.I. after his name. A Professional Associate has also the right, under By-Laws allowed by H.M. Privy Council to describe himself as "Professional Associate Chartered Surveyor."

AN ASSOCIATE must be more than twenty-one years of age, not a Surveyor by profession, but his pursuits must be such as to qualify him to concur with Surveyors in the advancement of professional knowledge.

AN HONORARY MEMBER must be a person who, either by reason of his position or experience, or his eminence in science, may be enabled to render assistance in promoting the objects of The Institution, but who is not engaged in practice as a Surveyor in Great Britain or Ireland. He has the privilege of being present and taking part at all Ordinary General Meetings, and of access to the Library, but no right of voting, discussing, or otherwise interfering in the affairs of The Institution; nor is he called on to contribute to its funds.

STUDENTS (who must not be under eighteen years of age) qualify as such by passing the Preliminary Examination. A candidate for Studentship who can produce a Certificate of having passed the Matriculation Examination of the University of Oxford, Cambridge, London, or any other University in the United Kingdom, or the Senior School Examination of London University, or who has passed the Senior Local Examination of the University of Oxford or Cambridge, or the Junior Examinations of the same with Honours, or who has obtained a Higher Certificate at the Examinations of the Oxford and Cambridge Schools Examinations Board, or who has passed the Examination qualifying for the Studentship of the Institution of Civil Engineers, or the Preliminary Examination of the Institute

* NOTE.—After October, 1913, Professional Associates will be required to qualify for the Class by passing both the Intermediate and Final Examinations.

of Chartered Accountants, the Royal Institute of British Architects, the Incorporated Law Society, is exempted from this Examination, and may be admitted by the Council on the recommendation (according to a form) of a Member and the Surveyor to whom he is articulated; but it is obligatory on all Students to undergo the Intermediate Examination under the conditions applying in each particular case under the Rules of Examination.

The Council may accord to Students such privileges, subject to such terms, regulations and restrictions as they shall from time to time prescribe.

Any person desirous of being admitted into The Institution (excepting to the class of Students) must be proposed and recommended according to a form, in which the full name, place of business (if any), usual residence, and qualifications of the candidate must be distinctly specified. This form must be subscribed by him, and signed by at least six Fellows or four Fellows and two Associates, certifying a personal knowledge of the candidate; or by four Members of the Council, of whom the President shall be one, after careful inquiry into the antecedents of the applicant.

The proposal so made, being delivered to the Secretary, will be submitted to the Council, who, on approving the qualifications, will determine the class for which the candidate is to be presented for ballot.

The following are the rates of contribution to the funds:—

	Annual Subscription.				Admission Fee.		
	£	s.	d.		£	s.	d.
<i>Student</i>	1	1	0	.	—		
<i>Associate</i>	2	2	0	.	3	3	0
<i>Professional Associate</i>	2	2	0	.	3	3	0
<i>Fellow</i>	3	3	0	.	5	5	0

No person can become a Member (other than an Honorary Member) of The Institution, unless and until he pays as his first Subscription to The Institution, in the case of becoming a Fellow of The Institution, the sum of Eight Guineas, in the case of becoming a Professional Associate of The Institution, the sum of Five Guineas, and in the case of becoming an Associate of The Institution, the sum of Five Guineas.

All Fellows, Professional Associates, and Associates are required, within twelve months after their election, to deliver to the Council an original Paper on some subject connected with the profession, or to make a donation to the Library.

The affairs of The Institution are under the management of a Council, which is elected annually, consisting of a President, four Vice-Presidents, sixteen Fellows, two Professional Associates, and two Associates.

The Session of The Institution commences annually on the second Monday in November, and continues to the end of May. The Ordinary General Meetings are, as far as possible, held on every alternate Monday during the Session. At these Meetings original communications are read on professional subjects, and their merits fully and freely discussed. Every Member has the privilege of introducing one visitor to these Meetings. Members are entitled to a copy of any printed publication issued by The Institution after their admission.

THE OPENING ADDRESS

BY

LESLIE ROBERT VIGERS (PRESIDENT),

AT THE ORDINARY GENERAL MEETING OF

THE SURVEYORS' INSTITUTION,

NOVEMBER 14TH, 1910.

Presentation of the Gold Medal to W. R. Davidge (Fellow).

The PRESIDENT said it was now his pleasant duty to present The Institution Gold Medal. This medal was awarded year by year to the author of the best Paper read during the past Session, and the Council had this year placed Mr. W. R. Davidge's Paper on "Town Planning Systems" at the head of the list.

This Paper had been a most valuable and comprehensive contribution to the *Transactions* on a subject which was arousing great interest.

He had great pleasure in handing Mr. Davidge the Gold Medal.

Mr. W. R. DAVIDGE (Fellow) said he hardly knew how to find fitting and sufficient words to express his thanks to them on that occasion for the distinguished honour which had been done him. He felt particularly gratified that the subject of Town Planning had been selected for such a distinction, as it was one with which

he felt that The Institution would in future have much to do, and on which the opinion of The Institution would carry great weight.

He particularly thanked the Chairman for his kind remarks both on that evening and also on the occasion when he had the honour to read his Paper.

He would like, while he had the opportunity, to express his sincere congratulations to Sir Alexander Stenning upon the honour which the King had seen fit to bestow upon him, and in doing so he was sure he had the cordial sympathy of the whole of his fellow Members, who must feel that The Institution, to which they were proud to belong, might claim a share in that honour.

The PRESIDENT then delivered his Opening Address, as follows :—

Not the least of the responsibilities which attach to the position to which you have done me the honour of electing me, is that of opening the Winter Session of The Institution with an Address from the Chair. The field, which opens out before a new President in considering the subject of his Address, is so wide, and the time at his disposal is so short, that much serious thought is needed to decide, not so much the questions which should be dealt with as those which should be left out.

In this I feel myself more fortunate than any of my predecessors, in that I am the second of my family to occupy this chair, and I can therefore turn to my father's Opening Address to supply me with a text upon which to speak to you to-night.

He, as some of you may remember, referred to what was then the new Central London Railway, but at that early date it was not possible for him to

enter very fully into details as to cost of construction, &c. That line has now been opened for several years, the loop at Shepherd's Bush has been completed, and the extension to Liverpool Street is now in course of construction. Four other Tubes have been engineered under our streets and opened for traffic. As they are now carrying about $148\frac{1}{2}$ million passengers per annum, they may be said to have fulfilled a most useful purpose, and must materially have relieved the traffic in the streets.

The cost of the station sites, depôts and easements for the Central London and the other three Tubes has been large, amounting to close upon £2,600,000, including the Whitechapel and Bow Railway and the widening and improvement of the District Railway in 1900 and 1904.

The cost of the station sites has varied from 7*s.* 11*d.* to £35 per foot super, but the injurious affection to adjoining property has been very small.

In the year 1909 I estimated the value of the property upon the routes of these Tubes, basing my calculations on the gross assessment, and I found the damage by injurious affection only amounted to the following figures:—

Central London Railway .	·108	per cent. of value
Baker Street and Waterloo		
Railway	·039	„ „
Great Northern, Piccadilly		
and Brompton Railway .	·127	„ „

In nearly all cases this injurious affection was at station sites, where the shafts have to pass through the upper strata before entering the London clay, and the amount included damage to adjoining houses by the removal of those on the station sites.

It is also interesting to note that, so far from the rental value of property being damaged, I found the assessments for rates along the route had increased, which must point to the fact that the rental value had not diminished. On this point the following information which I prepared in the year 1909 may prove of interest.

Central London Railway.—The increase in the gross assessments of the houses and shops fronting upon the streets under which the railway is constructed from Shepherd's Bush to the City was equal to 32 per cent. between the years 1900 and 1906, and between the years 1906 and 1909 there was a further increase of 8·7 per cent.

Baker Street and Waterloo Railway.—In this case the increase in the gross assessments between the years 1906 and 1909 was equal to 8·73 per cent.

Great Northern, Piccadilly and Brompton Railway.—The increase in this case was 17·3 per cent.

I think, therefore, that we may take it that the fears, which were so freely expressed lest property along the line of route should be seriously diminished in value and stability through vibration from the passing trains, have proved without foundation, and that great advantage has accrued to the public through these improved and speedy methods of transit, without hardship or loss to the individual.

Unfortunately, however, the cost of obtaining powers to construct Tubes and other railways is on the increase, and encouragement to private enterprise to afford further improved facilities for public transit seems to be conspicuous by its absence. As soon as a Bill is read in pour the petitions against it from every authority as well as from private owners, lessees, and others, all

asking for special protection of one kind or another, so that it appears to be a physical impossibility to satisfy all the demands which are put forward.

Promoters may insert in the draft Bill every protective clause for which there is a precedent, only to find either that an ingenious mind has evolved some new idea which is solemnly put forward by the authorities, or that the fight is resumed for something Parliament declined to give on a previous occasion. All this increases not only the cost of the Act, but too often the cost of construction also.

I consider that where it is possible and desirable local authorities should lose no opportunity which a Bill may offer of widening roads, but this should not be done at the expense of the promoters; the authority should pay the pro rata cost of such widenings, and it is in the interest of the ratepayers that this should be done, as it would save them from the loss which must usually be faced, where whole premises are taken, on resale of the balance of the land.

Many, I have no doubt, will be interested to learn that the land and compensation for the following Tube Railways have amounted to—

Central London Railway . . .	£75,287 per mile.
Baker Street and Waterloo Rail-	
way	93,656 „
Charing Cross and Hampstead	
Railway	49,875 „
Great Northern, Piccadilly and	
Brompton Railway . . .	43,199 „

The principle is altogether different in New York. There the authorities find the money for construction and provide the land, while the contractors pay as rent the interest upon the bonds issued to provide the

necessary capital for carrying on the work, together with 1 per cent. for the sinking fund. They have a lease for 50 years with an option for one extension of 25 years, and they covenant to provide the equipment and work the railway. The facility thus given for the construction means that their Tube cost from £200,000 to £250,000 per mile to build, whilst ours cost from £500,000 to £770,000 per mile.

It must not be forgotten that the New York line was partly shallow subway, deep tube, and overhead line, and that part of the line was four tracks; the cost therefore cannot compare exactly with the London Tube construction.

Then when the line is opened, almost before the company has had time to turn round, down comes the notice of assessment from the overseers' committee, so that there is little opportunity given to earn rates before they become payable. I see no objection to the payment as soon as possible on the stations, but where the line has not depreciated the rateable value of the neighbourhood under which it passes, and is quite a new undertaking, I think the question of rating this portion of the hereditament requires consideration.

The competition of motor omnibuses, which pay no rates for the use of the roads, although the railways pay their share towards their upkeep without making any use of them, is very serious, and it appears to me to be illogical that through this unfair advantage they should be able to cut down fares to the lowest possible figure, and thus compete with the railways which have expended so much capital in order to provide useful communication for the public. If one is exempt from the payment of rates it would seem that the others should be similarly treated for all except perhaps the station sites and

depôts. That is, the stations and depôts might be rated at their full value, but the earnings of the line should not be assessed as is at present the case.

The following table showing the rates paid by the four Tube railways during the year ended December, 1909, gives some indication of the burden placed upon these undertakings by local taxation, the total amount paid annually representing at $3\frac{1}{2}$ per cent. the interest on nearly two millions sterling.

	£
Central London Railway	33,107
Great Northern, Piccadilly and Brompton Railway	15,413
Baker Street and Waterloo Railway	8,790
Charing Cross, Euston and Hampstead Railway	9,626
	<u>£66,954</u>

From the rating of Tube railways perhaps I may be allowed to wander into the wider subject of assessment for local taxation generally. It is now nearly ten years since the Royal Commission on this subject issued their final report, and though Valuation Bills have been promised, introduced, withdrawn and promised again, we seem almost as far as ever from a settlement of this vexed question. Can it be that in Mr. Ure's speech of September last a careful searcher after truth may discover the reason of the seemingly unnecessary delay, and that an attempt will be made to fasten local, as well as imperial, taxation on the part instead of the whole.

While I cannot give time to enter upon so wide a field as this much-discussed and peculiarly controversial question, I should like to take this opportunity of placing before you a few suggestions for the amendment

—the necessary amendment, I think—of our rating procedure. It has been suggested, for instance, that a committee of the county council should be responsible for drawing up the assessment lists. I do not, however, think that the spending authority should have any part in that duty, but that this should be dealt with by an independent tribunal. Many undertakings which pay large—and in some cases the largest—proportion of the rates in a parish, not being represented, have no word to say upon the expenditure, and it would hardly seem to coincide with the most perfect ideals of equity, if those likely to benefit by a high assessment of such undertakings had anything to say as to the amount placed upon them.

Another thing, I am of opinion that members of assessment committees who are justices should not take part in appeals to Quarter Sessions in the case of companies' assessments. It would be in the highest degree improper for the chairman or a director of a railway company to sit on the Bench when some railway appeal was being heard, but it is a common thing for a member of an assessment committee in a neighbouring borough or union to sit and take part when such a case is being heard.

My view is that there should be a special tribunal of three independent men to hear all appeals in connection with special properties not assessed upon the ordinary principles of rating. I am not prepared to say definitely what that tribunal should be, but I am inclined to think it should be presided over by a lawyer such as a recorder, who should be assisted by a rating expert and a man of business. The rating expert should be a man of large experience, and should be precluded from undertaking private practice in rating matters.

The parish might still be the unit of valuation, but the rating area should be the county, and the valuation committee chosen from persons resident in the county, but not members of the county council or any other spending authority. There is indeed just now a special temptation to rating authorities to keep up the assessments of companies representing special properties, in order to help to make good the loss to the rates which is being caused by the effect of the Finance Act on the assessment of licensed property.

And here, in passing, I may perhaps be permitted to say that one cannot but feel that the decision of the Court of Appeal in *R. v. The Shoreditch Assessment Committee*—more commonly known as the Crown and Shuttle case—was based on every consideration of equity, while the names of the learned judges concerned are evidence that, from a legal point of view, it is equally unimpeachable. But what better proof could there be of the difficulty of foreseeing the ramifications of fresh legislation.

The present year has been rich in new Statutes affecting the interests with which our profession brings us into contact, and I propose to say a few words on the more important of them.

The Housing, Town Planning, &c., Act, 1909, it is true, found a place on the Statute Book twelve months ago, but it only came into operation with the current year, and it has aroused so great an interest among, not the profession only, but the public also, that I feel no apology to be needed for a short reference to it. The importance of its provisions are patent to all who either from interest or necessity have studied them.

Part I. of the Act for instance imposes new duties upon the owner of small house property, which neither

the freeholder nor the leaseholder can afford to overlook. Section 14 lays down that in any contract for letting for habitation a house, or part of a house, at a rent not exceeding in London £40, in boroughs and urban districts, of fifty thousand inhabitants, £26, and elsewhere, £16, there shall be an implied condition that the house is reasonably fit for human habitation, with a proviso that this does not apply when the house, or part thereof, is let for a period of not less than three years, upon terms that it be put by the lessee into a reasonably fit condition for occupation. The following section requires the landlord to keep the house reasonably fit for human habitation during the term.

In this connection the local authority is given very strong powers of closure or demolition over the landlord, who, however, beyond a right to inspect his property, is given no protection against a bad tenant. Local authorities, on the other hand, are enabled to make a closing order if the house is in their opinion unfit for occupation, and recently the borough of Camberwell dealt with premises under this section.

The owner in question, in the exercise of his right, appealed to the Local Government Board to rescind the order ; which they have power to do. They, however, ordered a public inquiry, which was duly advertised in the borough, and an inspector was appointed to hold it. Three days were occupied in hearing the case, and as a result the Local Government Board rescinded the order of the borough council making them pay the departmental costs, but leaving the owner to pay his own ; the latter result, unless there were reasons of which I am unaware, appearing somewhat hard and having the appearance of penalising the owner for defending himself against an improper order on the part of the council.

I do not wish to seem unduly critical of the action of

the department in this case, particularly as the Act has only recently come into force, but there is evidently something wrong when so comparatively simple an issue could only be determined after so lengthy and costly a hearing. It is probable that by the nomination of a professional man with judicial experience and technical knowledge both time and cost might have been considerably lessened; an important matter in the interests of justice if owners are not to be discouraged from appealing against arbitrary, and possibly illegal, orders made under these powers.

The remaining portion of this part of the Act contains a number of amendments of previous measures dealing with housing questions, with a view to encouraging local authorities to formulate improvement schemes where desirable, and for other similar objects such as the prohibition in Section 43 of back-to-back houses, a most important provision as I think most will agree, and one which should have great effect in putting an end to these unhealthy dwellings.

The more original, however, and perhaps the more important portion of Mr. Burns' Act is Part II., which deals with the subject of town planning, and has aroused the greatest interest and the most animated discussion in all parts of Great Britain. I do not propose to go into details with regard to the provisions contained in this part of the Act, for they were dealt with most ably by Mr. Willmot in his Paper of last Session, which with Mr. Davidge's Paper on "Town Planning Systems," and the combined discussion thereon, occupied four nights, and threw much light on this new and somewhat intricate subject.

Since then the Local Government Board have issued Regulations laying down the procedure to be adopted with respect to the preparation and adoption of town

planning schemes, although, having the lesson of the building by-laws before them, they have wisely included therein a power to dispense with or vary any requirement of the Regulations where reasonable cause is shown.

The Local Government Board also very wisely, in a circular letter addressed to town councils and urban and rural district councils, drew attention to the importance of co-operation on their part with owners and other persons interested in the land affected by a proposed scheme. This seems to me of the utmost importance for, although both the Act and the Regulations seem to anticipate that schemes will in the main be planned and put forward by local authorities, I am not sure that in practice this would prove the best and most successful method. In the past the responsible work of laying out our towns has been almost entirely in the hands of the surveyors representing the large and small landed estates adjoining the more populous centres, and on the whole I do not think it can be contended that the work has been otherwise than well done. The failures have usually been due to the impossibility under the old system of reconciling the apparently conflicting interests of two neighbouring landowners. This difficulty happily would seem likely to disappear under the present Act.

I agree, then, in the opinion, which Sir Alexander Stenning has expressed elsewhere, that there is already a large body of men having wide experience in this work, and that it is to them rather than to their confrères, the surveyors to the local authorities, that we must look for the successful carrying out of this part of the Act. While I should be the first to acknowledge the excellent work done by the latter for the health of the community, I do not think I should be dealing unfairly with them if

I said that as a rule they have neither the time nor the special experience necessary for drawing up the details of a town planning scheme; such details would probably be better dealt with by the private surveyor. But a very useful work lies before the official in bringing together the surveyors of the surrounding estates, and in co-operating with them to secure wide main arteries sufficient to carry the traffic of a future population.

These main arteries would usually be found to follow the line of existing highways, and no time should be lost in laying down their direction by means of schemes. In the majority of cases immediate widening would not be necessary, but a great future saving to the public would be effected were urban and county authorities to join in preventing any building within a prescribed distance from the centre of these arteries, and in thus protecting the ratepayer of the future from the main cost of street widening in existing circumstances.

Matters connected with town planning of all kinds were dealt with so fully and so ably in the Papers read at the successful Conference organised by the Royal Institute of British Architects last month that I feel it unnecessary for me to elaborate this part of my Address, but I should like to congratulate most heartily those who were responsible for the excellent arrangements of the Conference, and for the exceptionally interesting collection of plans, models and drawings exhibited concurrently at the Royal Academy.

From the Housing, Town Planning Act it is but a step to another measure, the importance of which is not perhaps altogether realised by every surveyor. I refer to the Development and Road Improvement Funds Act, which establishes a fund for aiding and developing agriculture and rural industries, forestry, transport, fisheries, &c., a nucleus being formed by a vote of half a

million sterling per annum for four years. This fund will be administered by a body of eight Commissioners, the selection of whom has occasioned some surprise among business men, although the inclusion of Sir Francis Hopwood among them gives some feeling of confidence that application for advances will be treated in a sound and businesslike spirit, and that the resources of the fund will not be wasted in impracticable experiments. Certainly the first advances which seem likely to be made would appear to bear out this hope. For there seems reason to believe that the Commissioners have approved an application from the Board of Agriculture for assistance in developing the horse-breeding resources of the country on the lines of the excellent and practical recommendations made by the Committee set up by the Hunters' Improvement Society, under the chairmanship of Lord Helmsley ; and, secondly an application from the Board of Trade and Scottish Office for some assistance towards the completion of the Stonehaven Harbour works.

Part II. of the Act deals with road improvement, and is therefore perhaps more closely allied with the Town Planning Act than Part I. A Road Board, of which Sir George Gibb—than whom no better man could have been selected—is chairman, has been set up and given power to make advances for the construction of new roads or the improvement of existing ones; or themselves to construct and maintain new roads out of a road improvement grant which will be established. This Board has appointed an Advisory Engineering Committee, upon which all will be glad to see the name of Mr. John Willmot, who is well known in this room, and whose experience as county surveyor for Warwickshire should make him peculiarly fitted to give advice on the construction and maintenance of roads, and other matters upon which the Committee will be consulted.

There is no doubt that the drain on local funds due to the ever-increasing motor traffic, and the demand for better and better road surfaces, which Mr. Bidwell referred to in his Opening Address, is one which tends each year to grow heavier and—being borne locally—too often presses inequitably on those who are least responsible for the increased wear and tear. I agree with Mr. Bidwell that the ratepayer cannot fairly be called upon to pay for more than the local needs of his district, and that any greater demands, necessitated by outside motor traffic, should be met out of national funds. The passing of Part II. of this Act is, I think we may hope, some indication that the justice of this contention is beginning to be recognised in high places.

I need not, in this Address, go into details with regard to the powers of the Road Board and the Commissioners respectively to acquire land, compulsorily if necessary, for the purposes entrusted to them under the Act, suffice to say that they are very similar to those with which recent legislation, such as the Small Holdings and Town Planning Acts, has familiarised us. I think, however, that all surveyors would do well to study the provisions of the Act, and to consider what schemes for local or national development should be placed before the Commissioners or the Road Board.

As President during the year in which has been passed the most important measure affecting land and real estate since the Poor Relief Act of the great Elizabeth, I shall be expected to say something about the Finance Act, although the time it has been in force has as yet been insufficient to enable us to arrive at an exact judgment of its effect.

It will be remembered that the Council of the Institution, when the new proposals were first placed before Parliament, thought it their duty—with no

political or party purpose, but as representing the profession most likely to appreciate correctly the future results of those proposals—to make known their views thereon, and this they did by the issue of two Memoranda and by a deputation to the minister in charge of the Bill.

After exhaustive discussion and much amendment in the House of Commons, with other vicissitudes later into which I need not go here, the Act was passed, and it is now our duty as professional men to do our part in oiling the cumbersome machinery and seeing that its wheels may work with as little friction as possible.

At the same time I think I should not be incorrect in interpreting the general opinion of the profession as being that the fears expressed in the Council's Memoranda have been justified by the event, and that real property of all kinds, but especially licensed property, has been seriously affected in value.

I wish it were possible for me to lay before you some figures, which could be accepted as statistically accurate, bearing on this depreciation of value, but I know of no returns which would assist me in compiling such a table. Those of you however whose business lies in the direction of the disposal of property and ground rents are, I believe, unanimous in the opinion that a great drop in capital value has occurred, and I think that no one can be trusted to gauge the pulse of the market better than you. But it must lie with the statistician of the future to show this by tables and curves.

The effect upon sales, however, can be measured with some degree of exactitude by means of the Return issued weekly in connection with the Estates Exchange Register, and the following table which I have had compiled from these returns with a view to comparing the sales each quarter during the past ten years may prove of interest :—

	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901
1ST QUARTER—	£	£	£	£	£	£	£	£	£	£
At the Mart	360,160	614,212	496,502	584,905	834,613	899,277	936,451	1,158,430	986,735	939,727
Country and Suburban	80,985	218,062	145,978	131,403	146,433	391,007	286,995	433,357	216,744	365,028
Private Contract.	66,305	172,365	202,065	65,394	130,896	221,855	76,100	227,528	420,645	250,470
2ND QUARTER—	507,150	1,004,639	844,545	781,702	1,111,942	1,511,869	1,299,546	1,819,315	1,624,121	1,555,225
At the Mart	859,222	1,188,905	1,119,640	1,343,836	1,440,983	1,859,102	1,830,865	2,193,349	1,985,473	1,903,105
Country and Suburban	1,003,879	622,612	584,323	597,881	714,588	748,143	886,985	892,976	823,614	943,306
Private Contract.	77,511	219,885	166,191	72,535	276,205	169,099	275,088	537,963	457,680	337,660
3RD QUARTER—	1,940,612	2,031,402	1,870,154	2,014,252	2,431,776	2,776,344	2,992,938	3,624,288	3,266,767	3,184,071
At the Mart	545,972	479,603	577,725	704,218	838,385	912,938	963,606	1,201,898	958,618	1,313,285
Country and Suburban	996,394	853,117	801,869	714,029	802,473	637,784	463,070	796,201	1,017,434	1,191,533
Private Contract.	195,310	583,192	398,886	230,866	526,760	506,737	106,139	558,462	314,166	400,916
4TH QUARTER—	1,647,676	1,915,912	1,778,480	1,649,113	2,167,618	2,057,459	1,532,815	2,556,561	2,290,218	2,905,734
At the Mart	—	499,472	539,624	710,633	1,221,313	1,110,357	1,165,957	1,213,330	1,817,395	1,396,931
Country and Suburban	—	536,792	297,392	265,392	437,196	494,872	353,162	532,217	647,611	609,714
Private Contract.	—	355,998	289,823	143,570	618,311	467,718	192,989	332,108	369,405	419,497
	1,392,262	1,392,262	1,126,839	1,119,595	2,277,020	2,072,947	1,712,108	2,097,655	2,834,411	2,426,192
	6,344,215	6,344,215	5,620,018	5,564,662	7,988,356	8,418,619	7,537,407	10,097,819	10,015,520	10,071,222

It is noticeable that during the first three years of the decade the sales averaged ten millions sterling, followed by a period of less buoyancy as the country entered upon a period of poor trade. The marked drop, however, in the total of sales which is to be observed in the years 1907 and 1908, must not, in my opinion, be attributed solely to trade influences, but should to some extent be laid at the door of those rumours of increased taxation on land, which sprang from the public utterances of politicians about that time. In 1909 it is true a small increase in the total was shown, but it must be remembered that the Budget did not pass during that year, and that this increase synchronised with a considerable improvement in trade. During the present year, in spite of a continued improvement in general trade, the total sales have sagged away until not only does the temporary improvement of 1909 disappear, but the first three quarters of the year—all we have before us at present—indicate that the total for the year will hardly exceed a moiety of that at the beginning of the decade, and this although the population of England and Wales has presumably increased during that time by about four million persons.

The question then arises: to what must this stagnation in the property market be attributed? and I fear there can be little doubt as to the answer.

The public, in fact, is nervous, and, not unnaturally perhaps, turns its attention to investments the capital, interest, or increment of which are not subject to a special tax. Nor can it be said that they have no reason for their nervousness, for beyond the heavy taxes which the new Act imposed upon land, both annually and on every kind of occasion and event, there are the possibilities, I had—in view of the Lord Advocate's speech at Dollis Hill last September—almost said the pro-

babilities, of further excursions into this field of taxation. To those who do not understand the subtlety of claiming an annual tax from a capital sum, the halfpenny in the pound of the Undeveloped Land Duty seems too insignificant and almost to cry out for increase, indeed it may prove no easy matter to get them to realise that that little halfpenny represents an income tax of not less than 1s. in the pound. There is further the proposal that local taxation shall also be based on site value, so that, with the effect of the present legislation still uncertain, and the prospect of future legislation still more difficult to calculate, it causes me no surprise that investors look in other directions for outlets for their capital.

I should perhaps add a few words on the question of mortgages and the influence the land taxes have had upon them, although here I fear my observations on this subject will not prove more cheerful.

For the same reason that investors have been put out of conceit with land for purchase, they have acquired a distaste for it for mortgage purposes. Instead of having a value as steady as or perhaps steadier than almost any other security, it is now subject to sudden and considerable demands for taxation, which must give rise to such fluctuations in value as will necessitate a much larger margin of value than was formerly the case, while present holders of mortgages have in many instances had either to call in the mortgage or ask for a reduction in the amount borrowed. The matter then seems to resolve itself into a vicious circle, for the mortgagor may be unable to find the money, with the result that the property will be forced on to the market, depreciating not only its own value but that of other property already on the market, and ending in loss to both parties concerned.

As President of The Institution, however, I should like to say a word of warning against a panic depreciation in the value of property. I have no doubt that, as soon as the market has settled down to the new state of things, a new level of prices will obtain, and it is our duty as valuers and surveyors to weigh carefully the factors which will determine that level. The population, for instance, of this country has in the past increased by about twelve per cent. each decade, and the mere housing of this increase, together with the provision of the workshops in which they will earn their livelihood, their transport from home to work, and the supply of their many wants, cannot help but give rise to a demand for both land and buildings, which must affect our calculations when we are asked, either to advise as to the price on which a property should be placed upon the market, or as to that which an intending purchaser might offer without great risk of loss.

Obviously, however, particular care must be exercised in the case of licensed property, for although the schedules dealing with excise liquor licences are less severe than as proposed in the original Bill, they are still of an exceptionally oppressive and onerous character, the charge upon hotels and restaurants proving a serious burden upon those who cater for the public by means of this indispensable business. Even in the case of an ordinary hotel, where the amount obtained from the sale of liquor is less than one-third of the total receipts, and which comes therefore within the terms of the reduction allowed by Section 45, the licence duty may be increased from £20 to £340, a crushing impost which in many cases must seriously affect the prosperity of the business carried on, the more so owing to competition from hotels doing about the same class of

trade but carried on without a licence. Customers of the latter can have wines, spirits, &c., sent in or obtained for their consumption, while they have other advantages over licensed premises in that cards can be played, and balls and other entertainments given without special licence from the police, and above all they pay no duty whatever. The new fashion of selecting certain classes for taxation may have many advantages, but I fear, as in this instance, it may occasionally give rise to cases which we have some difficulty in fitting in with our preconceived ideas of justice.

The holiday season this year has been, shall I say enlivened, by the issue of the famous Form IV., which has given rise to so much discussion, and has I fear in many cases reduced that period of rest to very minute dimensions. The question has been raised whether the form in question might not have been simplified, and it is possible that to some extent this might have been done; but, on the other hand, it must not be forgotten that the fault is rather with the Act than the Form, and that the complicated and many different values set up in the Act make it difficult to draw up a simple set of questions which any owner of property might fill in without professional advice.

It is here, I think, that the owner is given cause for complaint. The Government promised to make the cost of valuation a national charge, but an immense burden will be imposed upon individuals in connection with the filling up of these and other forms, and in settling the provisional valuations.

It has, I am aware, been stated that owners need not answer those questions, the replies to which they do not know, and cannot ascertain without expense. But this seems to be an example of Hobson's choice, for few

owners will care to risk a provisional valuation being made on an entirely wrong basis owing to full information not being placed before the official valuers.

The task before these gentlemen is one beside which the twelve labours of Hercules pale into insignificance. Not only have they, in the words of the Act, to make a valuation "of all land in the United Kingdom, showing "separately the total value and site value respectively of "the land, and in the case of agricultural land the value "for agricultural purposes," but the valuation must be of "each piece of land which is under separate occupation," and in the cases where the owner may think it desirable to ask for an apportionment, "any part of any land . . . "shall be separately valued."

The number of different valuations thus required is so stupendous that the brain reels in the endeavour to form some idea of the ground to be covered; but one thing, I think, stands clearly out, viz., that if the work is to be completed within the present generation, it will be impracticable for the official valuers to give to each individual valuation the time and thought looked upon as essential in private practice. The necessity on the part of owners for professional advice in settling the original values, which are to stand for all time, is therefore intensified, and the burden of cost tied the more tightly to their shoulders.

It is impossible to make an estimate of the cost which will thus fall directly upon owners in this connection, but it will probably amount to some millions sterling, and when to this is added the expenses of the valuation directly borne by the taxpayer, we shall obtain a total cost to the country the interest upon which will, I fear, eat a very big hole into the annual returns anticipated from these taxes.

Gentlemen, may I, before concluding, thank you for the great honour you have done me by electing me your President, and express a hope that I may be able to represent you in such a manner as in no way to lower the status of the profession, and to emulate so far as my ability may permit the high standard set by the eminent Presidents who have preceded me.

When I look back to the days of my attendance as a student at the meetings in the old house, I find it difficult to realize that I have been chosen to follow in the steps of those who occupied this position in those days, and whom I still look back upon with reverence as the giants of the past. I can, however, promise that I will do all in my power to further the interests of the profession to which I am proud to belong, and in which I have worked for the past thirty-seven years under the guidance of my father. You will, I am sure, understand how great a joy it is to him, and to me, that you have thought it well to place me in this chair during his lifetime.

Mr. DANIEL WATNEY (Past-President) said it gave him special pleasure to ask the Meeting to pass a cordial vote of thanks to the President for his very able Address. If his memory served him aright he proposed the same vote of thanks to the Chairman's father when he was President, and he looked back to that with great pleasure.

There was an unwritten rule that the President's Address must not be discussed, and he was quite sure that those who had followed the reading of the Paper they had just listened to would find that no discussion was necessary. It was an able statement of facts; it gave them information concerning all recent legislation which applied to the surveyors' profession, and although

the President had touched but very lightly on the Finance Act, he had not led them to anticipate large profits from the settlement of the provisional valuations. He hoped these valuations would work out fairly, but he was now looking forward with great anxiety to know what the President in 1911 would have to say on the working of the Finance Act, as far as its results would then be known, for even in twelve months' time he did not think it likely that they would be in a position to say what its entire effect might be.

He would not detain them further but would simply ask them to pass a cordial vote of thanks to their President for his interesting Address.

Mr. WILLIAM WOODWARD (Fellow), said he had been asked to second the vote of thanks, and he could assure them honestly that he had never performed a duty of that character with so much pleasure and delight. He did not suppose they would believe it, but nevertheless it was a fact that he had watched the career of their President from youth upwards. He had been trying during the evening to read the names of the past Presidents of The Institution upon the walls of the lecture hall, and although he was not a member when the first President occupied the chair, he could safely say that he had attended the Meetings of The Institution from its very commencement.

Mr. Daniel Watney, the doyen, if he might so term him, both of The Institution and of the profession, had told them that it was a rule, and he thought a very good rule indeed, in fact an unwritten law, that a Presidential Address should not be criticised; but even if this rule were not in force any observations he might have had to make upon the Paper would have been in the nature,

not of adverse criticism, but of eulogy. He had often wondered, as many of those present must also have done, how it was that the President of each successive year should have been able to import into his Address anything like originality; this Mr. Vigers had certainly done, but he thought they would agree with him that, although the general tone of the Presidential Address had been redolent of pessimism, still that pessimism was warranted. It was no good crying peace when there was no peace, and it was impossible to live in peace in this country under present conditions. In an assembly like that it was not for him to express or to give the slightest indication of his political opinions, but he gathered from their laughter that they were tolerably well aware what they were. Why could not they be left alone? Unfortunately this seemed impossible, and the result, as had been stated by the President, was uncertainty and nervousness in all matters relating to the purchase and sale of land.

A considerable portion of the Address had been devoted to Town Planning, a subject well worthy of occupying so prominent a position, for there was a great field open to surveyors in that direction, and the only criticism that he wished to make upon the observations of the President with regard to Town Planning was that he should have liked to have seen—even though in brackets—some slight mention of the word “architect”; but perhaps that was an omission, which they would find supplied when the Paper was revised.

In conclusion he could only say what he said at the beginning, that he seconded this vote of thanks with the utmost pleasure, and he felt sure that at the end of his term of office they would be able to say to Mr. Vigers, “Well done, thou good and faithful servant.”

The vote of thanks having been put to the Meeting and carried unanimously,

The PRESIDENT said that as they had already listened to him for so long that evening he would not keep them, but he heartily thanked Mr. Watney and his friend the new Mayor of Hampstead for their kind words, and the Members for the way in which they had received the vote of thanks.

The Meeting then adjourned.

AT
THE ORDINARY GENERAL MEETING,

Held on Monday, 28th November, 1910.

LESLIE R. VIGERS (President) in the Chair.

The discussion was resumed on the Papers read at the Ordinary General Meeting held on Monday, 25th April, 1910, by R. F. Grantham (Associate), entitled "Road Construction and Maintenance," and William Menzies (Fellow), entitled "Additional Remarks on Road Maintenance."

Before calling on Mr. H. Freyberg to resume the discussion, the President asked the Secretary to read the following communication, the writer being unable to attend the meeting.

From Mr. P. WALTON HARRISON (Professional Associate) :—

I have been greatly interested in the Papers read by Mr. Grantham and Mr. Menzies. As a road surveyor with a varied experience under county and urban district councils, and at present having sole charge of the management of a fairly large mileage of rural highways, I should like to be permitted to make a few remarks.

Mr. Grantham mentioned that after having made trial holes in a main road near London, the thickness of

road metal thus revealed varied from $5\frac{1}{2}$ inches to $8\frac{1}{2}$ inches; and Mr. Wakelam, in the course of his remarks, stated that the average thickness of metalling of main roads in a western county, as shown by a series of trial holes, was about 4 inches.

When I was an assistant under a county surveyor in the eastern counties, in order to test the thickness of crust—and foundations, if any—of a main road between two important county boroughs about 22 miles distant from each other, a series of trial holes were made at about every half-mile. The thickness of metalling of each—Guernsey granite, Leicestershire granite, Rhenish basalt, and picked flints—was carefully taken and these measurements varied from $4\frac{1}{2}$ inches to $7\frac{1}{2}$ inches, the average thickness of metalling being $5\frac{1}{2}$ inches.

Mr. Grantham states that “Limestones and Kentish “ragstone do not make good roads, as they readily “grind into dust in summer and mud in winter.”

With regard to limestone, although this may be the result in a few cases, certainly many limestones furnish some of the best materials for road metalling. For instance, the carboniferous limestone, quarried extensively in the Mendip Hills, is used by county, urban and rural district councils in a number of counties in the West of England. The excellent wearing surface of these roads metalled with this stone, and their comparative freedom from dust and mud, is conclusive evidence of both the suitability and durability of this limestone.

Kentish ragstone is used extensively throughout the county of Kent for repairing many miles of important main urban roads and rural highways. The main roads of Kent are unquestionably amongst the best to be found

in England and Wales. Although Kentish ragstone is not suitable for road making in constantly damp, low-lying districts, it is particularly well suited for hilly roads, in that it is non-slippery and affords an excellent "grip" for horse traffic. I recently visited the most important ragstone quarries in Kent, and from particulars furnished by the various quarry owners, I found that during the year 1909 approximately 137,000 tons of ragstone were quarried. Of this total about 70,000 tons were used for road-metalling purposes.

Traction-engine traffic, as Mr. Grantham observes, has increased very considerably during the past ten years. I would here like to venture a few remarks with regard to the revenue derived from the vehicles which cause most of the damage to the highways, namely, traction engines, motor lorries, and motor cars. The effect of this traffic upon roads and bridges is in most cases very damaging. It is quite exceptional to find roads that have been constructed upon proper foundations; it will be generally found that they have been formed by simply placing layers of stone, of varying qualities, upon the natural subsoil without adequate and in many cases without any subsoil drainage. Although roads of such construction have been found to suffice where the traffic is moderate they are quite incapable of withstanding the stress of traction engine, and other heavy traffic, without serious damage.

The increasing use of traction engines for haulage purposes renders it necessary that steps should be taken to obtain such alterations in the present Locomotive Acts as will, in some measure, safeguard the authorities who are responsible for the maintenance of our highways. The responsible authorities under the Locomotive Act, 1898, may issue licences for the use of locomotives

weighing not more than from 10 to 14 tons when empty, at a fee not exceeding £10 for the former and £18 for the latter, these licences to be renewed annually. Although owners are required to obtain these licences in the county in which their locomotives are ordinarily used, this is found not to be the common practice with travelling showmen. The maximum scale of charges for licences is not compulsory, as it should be. Upon inquiry it was found that, in the case of eight authorities in adjoining counties, the licence for an engine under 10 tons in weight varied from £2 to £10, and the additional fees for extra weights varied in the same manner. The result of this is that owners obtain their licences where they are cheapest, and then by obtaining a daily permit for 2s. 6d. travel wherever they wish.

In another county in the East of England, where I held an appointment, six traction engines were engaged during a fair. The whole of the licences had been taken out in adjoining counties where the lowest charge was made, whilst the owners of four of the traction engines resided in the county in which the fair was held. It will be seen therefore that it is most desirable that a uniform scale of charges should be adopted, not only for licences but for all purposes.

I am in entire agreement with Mr. Menzies as to the importance of having the materials evenly spread. This result can best be obtained by the material being shovelled from the carts direct to the road instead of first tipping the stone in heaps on the road, as is often done, and afterwards spreading where required. The almost invariable result of this latter practice is for the larger stones to be tipped out in the first heaps, whilst the last heaps consist of the smaller material. If the metalling is spread without first intermixing the different

sizes the effect produced cannot but be unsatisfactory, unevenness of surface, disintegration, and "pot-holes" being the result.

In the autumn and winter months, when the roads need unremitting attention in the shape of scraping and brushing, the cost of manual labour amounts to a considerable sum. This unquestionably is increased by the carelessness, or at least want of forethought, displayed by persons hauling crops off and manure on to the land. Statutory powers should, in my opinion, enable highway surveyors to compel all persons to clean mud, manure, or other adhesive matter from the wheels of all vehicles, wagons, or machines before leaving lands for the roads; and in the event of such persons not complying with such regulations, the highway authority should be given power to recover costs for removing such mud, &c., and for reinstating any damage caused by such default.

Mr. H. FREYBERG (Fellow), resuming the discussion, said he had not had the advantage of attending when the Papers were read, and, therefore, he had to study them at rather a disadvantage. It seemed to him that all who were interested in the question of road making and maintenance should bear in mind the lesson offered them for a great many years past by the great railway lines of England; as they had increased the weight of their locomotives, the speed, and the continuity of their traffic, so they had not only doubled, trebled, and quadrupled, the strength of the metal on which those trains were carried, but they had also added considerably to the quantity and quality of the ballast underneath those metals. What the railway companies had had to do with their lines would ere long have to be done

with the roads. What was good in the days of Telford and Metcalfe, and later in the times of Macadam, would not serve to-day. The wear and tear of the roads was not only great at the present time but was increasing day by day, and it was not merely a matter of improving the surface, but it was also necessary that the foundation and drainage of the underpart of the road should receive more careful attention.

The treatment of the surface was of course very important, and he thought that if that treatment were good, so as to render the road impervious to water, then the camber of the road could with safety be decreased and by that means the wear and tear of the road would be more evenly distributed than at present.

He gathered from the remarks of Mr. Grantham that he was quite in favour of granite and considered it to be really cheaper in the long run than any other form of surface metal. Although granite no doubt was the best, there might be, as the writer of the interesting letter they had just heard read pointed out, positions in which other materials might be almost equally effective, and at the same time very much less expensive. So far as wood paving was concerned, he himself had always considered it an insanitary material, and he believed that with a boom in the building trade they would find timber so expensive that its price would be almost, if not quite, prohibitive.

As a member of the Kensington Borough Council he thought it might perhaps be interesting for the members to learn about the block-making machinery which was installed at the dust destructor station by a member of The Institution, the former surveyor, Mr. Weaver, who was no doubt known to many of those present. The clinker coming from the destructor was crushed

until it passed a $\frac{3}{8}$ -inch mesh; then 9 pounds were mixed with one pound of Lake Trinidad asphalt, heated to 300° Fahrenheit by the waste steam, and after the material had been compressed it was cut into blocks 9 inches by $4\frac{1}{2}$ by 3, which were then set to weather, and after a certain time used for paving; each block weighed about 10 pounds, and the cost of labour and the asphalt in the making, not counting any cost of plant or interest on capital, came to about 2s. 6d. a yard super. Those blocks had been used for the last three years. The experiment had been started in secondary streets; three inches of the road metal were removed and the bricks laid flat, not on edge, on a skimming of cement and sand, the joints being well grouted in cement. They found that it was non-absorbent, and after three years' experience there had been only one complaint, their opinion being in that case that the blocks got touched by the frost before being put down. Whether they would be applicable to roads where traffic was heavy, time and experience would prove, but of course if they were laid on a road subject to very heavy traffic like Brompton Road, or High Street, Kensington, naturally they would require a heavy foundation of concrete. In most of the cases quoted he was told that there were some 6 inches or 9 inches of metal underneath the blocks when laid.

Some remarks had been made in the discussion about the surveyors of local authorities. If any member present belonged to a local authority he would at once acknowledge in what a very difficult position a municipal surveyor was placed; he had not only to have a competent knowledge of all the multifarious subjects connected with the profession, but at the meetings of the council

he was generally fired at in all sorts of ways about the dismissal of men and employing or not employing this man and that man, so that it really was a marvel sometimes how some official surveyors managed to get through their work at all. To give an instance of that, in their council at Kensington one member gravely suggested that the surveyor of the council if he did his duty should at once dispose of the scarifiers and employ ten or twenty men who were thrown out of employment by the use of that machine. Considering all things the local surveyors were really worthy of their support on every possible occasion.

The most important part of Mr. Menzies' Paper, in his opinion, was that which said that the surveyor's most difficult duty was fighting the variations of temperature and other idiosyncrasies of this climate. It was difficult to find an economical road material that would serve all weathers and be equally efficient in all conditions. He noticed that Mr. Menzies suggested that the old turnpike system was fair. There was no doubt it was, but he was afraid they could scarcely advocate a return to that with any hope of receiving the tolls.

In explanation of his first remark about the increased traffic, he noticed that Mr. Menzies said that the roads of Surrey had during the last few years increased in the cost of upkeep by something like 43 per cent. He had also suggested that the motorists might help in the use of the road a little more than they did. He (the speaker) was bound to say that when he had noticed the motorist show any consideration for the road, the economy had generally been practised at the expense of the passing dog or the wandering chicken.

Mr. A. GLADWELL (Visitor) said that like the previous

speaker he was at some disadvantage in not having studied the Papers so well as he could have wished. He should like to express his gratitude to Mr. Freyberg, and when he told them that he was one of those ordinary surveyors mentioned by him, they would at once realise that he had very good reason to feel grateful. It was so seldom they got any recognition at all that when they did it almost took their breath away.

He was present at the last discussion, and something had been said, he thought by Colonel Crompton, for whose opinions they must have great respect, as to the absence of damage done by traction engines to roads. This he could not agree with, as it appeared to him that the question of the damage to roads was not as between motor vehicles and horse-drawn vehicles, but was almost entirely due to traction engines—the damage done by a traction engine could not be compared to anything in the world, except perhaps to an earthquake. So far was it so in his district that he felt that if he gave his attention solely to making his roads strong enough to bear the traction engine, practically every other question connected with road maintenance, except that of finance, would settle itself. He happened to be surveyor in a district which was sandwiched between Wycombe, the centre of the chair industry, and leafy Surrey. They appeared to grow a great deal of timber in Surrey, and sometimes he thought that the whole of the timber of Surrey was coming through his roads to Wycombe, and it became a very serious problem for any local authority to cope with such traffic. The regulations governing that traffic were very much behind the times; the design of the vehicles themselves was not what it might be, and in his opinion the vehicles might very easily be designed so as to do much less damage to

the roads. The matter was not brought prominently before the public owing to the relatively few vehicles there were of that character, but what they lacked in number they made up in the effect they had on the roads.

With regard to the question of the preservation of road surfaces, he was afraid he was not one of the school who believed very strongly in mere surfacing or tar painting of a road. If they used the quantity of tar, which was required to tar a road two or three times, in some one or other of the constructional methods more or less in common use, and at the present day fairly well understood, they would have far better value per gallon of tar used than by simply what he perhaps irreverently would call "road varnishing." Of course at present it was necessary, and would be for some time, to indulge very freely in road surfacing or in tar painting for the preservation of road surfaces, because he supposed there was not money enough in the country to indulge very largely in constructional methods. His experience, however, had been that the cost of the constructional method whereby tar could be incorporated into the heart of the crust of the road was so very little in excess of the cost of the ordinary water-binder methods that the time must come when that would be adopted, especially if the Road Board, as he saw there was a very good prospect of it doing, made a grant in aid of that particular method of doing the work.

His experience had been that to give a 3-inch coating to an ordinary road cost in his district 2s. a square yard, but if he gave a $2\frac{1}{2}$ -inch coating, using a bituminous binder, he got for the 2s. not only a stronger road but a cleaner road, a more resilient road, and one which was vastly easier to repair. He had in his mind a road he

resurfaced under a system which was in its experimental stage four years ago. That road had to bear a very considerable amount of general traffic, from traction engines to railway motor omnibuses and a considerable amount of trade traffic. That road had only required tracking in the centre with $\frac{1}{2}$ -inch to $\frac{3}{4}$ -inch granite chippings coated with tar during the whole of the four years. Previous to that time it had had to be entirely resurfaced with granite every three years, and he did not apprehend that he should ever have to resurface that road entirely with granite because it was so perfectly easy to restore the wear year by year by the application of a mastic or matrix composed of granite chippings tarred with the proper tar composition.

It was quite obvious to any practical surveyor that before they could repair a defect or pit-hole in a road under the water-binder system, if it was a very small hole they must make it larger by picking it up, but they could repair a small hole in a bituminated road with a $\frac{1}{4}$ -inch matrix, they could repair one a little deeper with a $\frac{1}{2}$ -inch, and if there had been a subsidence and it was deeper still, and they did not consider it advisable to disturb the foundation, they could use a still larger matrix.

He was perfectly satisfied that in the interest of economy it was better to incorporate the tar in the structure of a road than merely to paint it. Of course even that system had its limitations. For instance, he should never recommend a road to be constructed with gravel as aggregate and a tar-binder, because he considered that a gravel road should have, for the safety of the traffic passing over it, a certain proportion of sand always lying on the surface, because gravel itself—the aggregate of gravel—wore very smooth, and the only

chance of getting a grip for the traffic was the sand which accompanied all ordinarily constructed gravel roads. He thought that Kentish rag or limestone or certain flints would be quite suitable to use in conjunction with the tar-binder, but not gravel.

He had read the Papers with very much interest at the time, and he submitted that they were in themselves a very valuable contribution to the proceedings of The Institution.

Mr. HENRY YORK (Fellow) said, in offering a few remarks on the Papers, he wished to compliment the authors for their temerity in broaching a subject which the man in the street considered he knew more about than those who had devoted their time and attention to the matter, and who would tell the surveyor how to make or mend a road better than he could do it himself.

With the bulk of the matter in the Papers he was in thorough accord. The whole phase of the present state of the roads seemed really to resolve itself into the question of laying dust. The principal roads throughout the country, as far as he had been able to judge, were sufficiently strong to bear the traffic in the ordinary way; it was only a very few roads here and there which would plough up under the weight of heavy traction engines, the ordinary traffic of the district was quite maintained. He had had in his own case roads with only 5 inches of metal on a gravelly sandy subsoil, and they stood every possible traffic which could be brought to bear upon them.

He had also, under his present care, one of Telford's roads, and that led him to say that he had a greater admiration for Telford's specification than he had for the construction of his works. The road he referred to was

composed merely of local gravel to a depth varying between 18 inches and 2 feet. That road, notwithstanding the depth of metal, would persist in running into little pit-holes about the size of one's hand. He put that down to the heavy traffic crushing the stones on the surface, the foundation being sufficiently thick to resist the compression, there was no elasticity in it, and in places the coating material was absolutely crushed. Of course it was impossible to get a material universally equal in its construction and strength; even in the case of granite one stone here and there would come from a different part of the quarry and be softer and give way earlier, therefore those little pit-holes formed. That seemed to be a characteristic of granite much more than any other material which he had noticed, and an old friend of his used to say a granite road always went "pudding-basiny." On the other hand, in an ordinary summer season, the surface of a gravel road was very hard to beat but it would not stand the traffic in the winter.

The history of the present condition of the roads was an interesting one. After the four or five principal roads were constructed by the Romans, nothing seemed to have been done in the matter of road construction until somewhere in the 17th or 18th century. Possibly there was no necessity for it because most of the traffic up to then was by pack horses, very few wheeled vehicles were used, and in fact (a thing which might have escaped observation from a good many) his friend the late Mr. Blackmore, in his book "*Lorna Doone*," mentioned the case of a kind of sledge being used in Devonshire without wheels on ordinary roads. The effect of that, of course, would be simply frightful, if the toe of the sledge happened to catch in a loose piece of road, it

would be like the present skid pan of a heavy vehicle, simply ploughing up the surface.

When they came to 1800 they found the Inclosure Commissioners setting out roads and deciding who should repair them. But he never heard of anybody being compelled to repair the roads which were put under his special charge. In 1835 the principal Act of Parliament relating to the upkeep and maintenance of highways was passed—the Highways Act of 1835. That was really the first attempt on the part of Parliament to do anything for the general welfare of highways. It was instructive to notice who were the persons who might be appointed for the care and maintenance of highways: “Any person living in the “ parish or any adjoining parish and having estates, “ houses, lands, tenements, or hereditaments within “ such parish in his own right or in the right of his “ wife, of the value of £10 by the year, or a personal “ estate of the value of £100.” So that that was the qualification for surveyors to maintain roads, and he thought it might be taken that that was generally the accepted qualification and no other was looked for. In his earlier days the respected blacksmith of the village was the surveyor of highways; probably he had a knowledge of metal, but they did not distinguish between road metal and the other metal.

An acute phase in road-making had now been reached because of the great variations in the necessities of the vehicles which were used on roads. The law had sanctioned heavy traction engines on the one hand, with trailers behind of 30 to 40 tons weight, travelling at speeds of anything up to 9 and 10 miles an hour. On the other hand they had the slender bicycle, whose margin of safety he should hardly like to calculate,

running on the same class of roads, and the motor car which could speed along swiftly at a rate approaching that of a railway train. Modern roads had therefore to bear a very severe test, and so far as he had been able to observe they bore it admirably.

The great difficulty was with the dust from rapidly moving vehicles, and certain vehicles apparently made more dust than others. Mr. Grantham stated that it was entirely due to the speed of the vehicle, but he had noticed that some, although going at a less speed, would create more dust than others going at a faster rate. A species of tar macadam had been generally suggested as the best remedy, tar painting of the surface being only a palliative. He was ready to admit that that system was excellent, but its great expense would preclude its general use in urban districts. In a country road it might be feasible to put on an extra 4 inches of tar macadam to seal the road and make a proper surface, but in an urban district, where there were kerbs and channels already existing, one could not heighten the road by another 4 inches, and consequently they would have to remove the existing surface. Mention had been made of Mr. Winter's piece of tar macadam at Hampstead where he executed a length at 3s. 6d. a yard super, which came to £2,464 a mile, but any ordinary council would hesitate before they spent anything like that sum on their roads. It was a matter for a loan, and the duration of that loan would be limited possibly to three years, as he did not think the Local Government Board would sanction anything more than that for a tar macadam road.

He had noticed that after the first year's wear in tar macadam the surface of the stones stood forth as a

mosaic. The grind of the wheels of motor cars and other vehicles produced a small powdery dust, the bare stones showing on the tarred surface; the tar portion was shown in the minute interstices. He judged, therefore, that the life of a tarmac road was not so great as one might at first suppose. If any means could be devised by which the tar-painted surface could be made to continue throughout the winter without churning up into the black butter which it usually did, he thought that would be the cure for all the defects in a road.

With regard to constructing foundations to existing roads, it seemed to him that in the country they might almost do it on the topsy-turvy principle of putting metal on the existing road and raising the roads all through. Instead of excavating the foundation the present road might be used to form a foundation, and then they would have a road somewhat similar to Telford's road in his district.

The gradient of one in twenty mentioned for tar macadam roads was rather severe; he did not think horses could negotiate that in anything like wintry weather. He had found that so, and the tendency nowadays was rather to forget that the horse was still a useful animal on the road, and everything was sacrificed to the motor car.

The Paper on "Maintenance," he thought, was admirable; but one of the few points he would like to mention was the metalling of the roads on one side at a time allowing the traffic to use the other side. There was very great difficulty in his experience in getting quite a perfect seam down the centre of the road, and that method of road repairing nearly always left a bad place on the middle of the road, not always apparent at first, but subsequently becoming so. In

repairing roads through the summer it was quite possible to do it, but he had found if dry weather ensued the surface was apt to be somewhat friable and loose stones got kicked about.

He was pleased indeed to notice the commendation of good road men. The old days were passing away when the poor old man who was fit for nothing else was put on the roads. It required a man with a good amount of common sense properly to repair and maintain a road, and local authorities were now beginning to see that.

With regard to deterioration, he believed that the work had to be done too rapidly. They were getting their rollers heavier; they had a heavy steam-roller to which was attached a scarifier weighing another ton or 30 cwt., and they were getting their rollers up to 12 or 13 tons in weight, which to his mind was too heavy for really perfect work. He granted that a lighter roller would require considerably longer time to make a perfect surface, but in the end the surface that it produced was far superior. They were too American in their notions just now, and he was afraid they could not wait for a light roller to make the road.

The quantity of metal mentioned, 33 tons for a day's work of rolling, was a very high average; it might be done where it was put on in an extremely thin coat, but if the coat was of any thickness at all it was as much as could possibly be done with any satisfaction, and considering the number of stoppages for traffic which had to be made in urban districts it was more than he expected men to put on.

Mr. W. WORBY BEAUMONT (Visitor) said he had had the pleasure of reading the two Papers. In regard to the first he thought one might say that it was on road

construction generally, and was a useful reminder of the best practices and methods that were to-day most in vogue, and although the Paper was apparently written twelve months ago, in spite of the rapid advance of all methods of road construction it was still most useful as a reminder of what should be done.

He would like, before proceeding further, to ask the last speaker whether, in looking at any time at the substructure of the Telford road under his charge, part of which was made of gravel only but of great depth, he had found that a large part of the whole of that substructure material was of a rounded character. The frequent potting of a well-made gravel surface with that depth of foundation seemed to suggest that the old material at the depth to which he referred was in a rounded easily mobile condition, and hence whatever might be done with the surface there would be ready movement occurring which would prevent his obtaining a really stable crust. If he had noticed that, it would be interesting if he would mention it. In other cases it was quite possible that a somewhat thin substructure to Telford's roads might have been quite sufficient when made on or close to a rock foundation.

There was no doubt that the traction engine, especially the very heavy engines, including those used by showmen, were doing much harm to even good roads made by the most recent methods, and it became a question whether those engines should be allowed to travel, hauling the loads that they did, which indeed became possible only by their own great weight. He had seen traction engines hauling showmen's wagons pulling up hill they were themselves stalled, and that not until their ribbed tyres had cut out holes in the roads sufficient to prevent even their own further movement.

He thought that was a thing which should no longer be permitted. If those people wanted to carry and haul those heavy shows, let them do it with a lighter load, which would mean using lighter traction engines, and let it be those which were strictly in accordance with the Local Government Board's regulations, and not, as at present, only partly in accordance with those regulations. It would take them a little longer, but that would be of no matter whatever to anybody except the particular show owner, and as far as one knew there was no reason for being so very particular about a little extra cost to him in hauling that particular class of goods.

He might say that the Paper dealt not only with road construction in the ordinary way, but especially with that which has been occupying so much attention in the last few years. It referred to the necessity for first obtaining the waterproof condition of the road, and then maintaining it, but it happened that in the making of the best form of road, as had been mentioned by more than one speaker that evening, and particularly by the last speaker, the production of the best road did at the same time give one the waterproof road, and the difficulty, therefore, which Mr. Grantham referred to in securing a waterproof character would only remain in respect of those that were made with water and the ordinary method of water binding.

Mr. Grantham had referred to the gradients that were, or should be, in existence in the roads of this country. He mentioned among other things that not more than about one in twenty should be permitted, or at all events could be considered satisfactory. He also mentioned that modern means of transport would make little of a gradient of one in twenty so far as ascending that gradient was concerned, but he thought that

a steeper gradient, or even that one, would be objectionable from the point of view both of the danger to the vehicles and of cutting up the road. He would like to point out that the force which was necessary to prevent a vehicle going at a dangerous pace down a well-made road of one in twenty would be approximately the same force as that which was necessary to bring it up the hill; and that although it might not be so often or so easily noticed, the pulling of a heavy load up a heavy gradient did pull the road about, a fact which became obvious afterwards when the same force came into play in order to prevent the sliding of a vehicle down the gradient.

Those who were concerned with the road-making of the future should do their best to keep the gradient down as much as possible, even though mechanical vehicles could descend any of those gradients; and in that respect they should follow the French in their construction of roads. It was quite true that the mechanically-propelled vehicles could deal with these gradients, but it was not only the owner of these vehicles that one had to consider, it was for the consumer of the materials carried by those vehicles, whether the goods were those of the miller, or the brewer, or the coal merchant, the cost of carriage was added to the cost of the article to the consumer. Only a few years ago he had been able to show that, taking into consideration the numerous gradients of important roads in this country and traction resistances generally, a saving in the heavy transport work of this country would be effected equal to something like a 3 per cent. return on 100 millions sterling which would be needed to put the roads in a first-rate condition, were steps taken so to improve the gradients and surfaces of the roads as to

reduce the horses necessary to do the work to the lowest effective number. As everyone knew, many millers and others had on, say, a 10 or 15-mile journey, to send three or four horses where two horses would be enough if it were not for perhaps one half-mile of the whole of that journey, and in various ways the cost of transport was increased by the numerous gradients which it was one of the duties of the Road Board and others to eliminate in the future.

With regard to convexity, which was the next matter touched upon by Mr. Grantham, he thought if we were to have the roads made, as no doubt they would be made in future, of improved materials, and having regard to the method of construction, it would be possible to have a convexity not of one in forty but more like one in sixty, and he would like to point out that in too many of the roads, even modern roads, where it was one in forty, nearly the whole of the convexity was made, not across the whole road, but just by rounding off or grading the six or eight feet towards the kerbs, and hence the whole of the traffic always tried to use, and did use, the centre of the road. Especially in the case of asphalt roads they found the traffic keeping away from the sides because of the danger of sliding down to the kerbs. In older times when water was the only material used in persuading the various materials to take their proper place in forming the surface, it was excusable that there should be a very considerable convexity, but with the materials that were to-day being used, and which would be more used in the future, there was no reason whatever for very convex roads and a perfectly or nearly perfectly flat road might be used. He had been told that with such a road the water would not run off even sufficiently to clean it.

He, however, had never spilt water on a flat table that had remained there for any length of time, and he was perfectly satisfied that if on a well-made road surface of modern materials they had a regular camber of about one in sixty it would be all that was necessary.

Mr. Menzies had mentioned roads made with water-bound materials, and had referred to round gravel, &c., that could be used, and which he had used with more or less success in certain places. In reference to the various substances which he said might be used in some cases, it should be mentioned that materials unsuitable for finished surfaces became quite satisfactory, even gravel, when they were firmly held in with bituminous or tar-pitched material properly and sparingly used throughout the whole body. If the round substances were not present in excessive quantity, and if the voids which would occur between them were properly filled in with the other smaller materials all properly coated with bituminous matter, then that which would otherwise be unsatisfactory could be satisfactorily used. Mr. Menzies said that the casual spreading of materials was not sufficient, and he was right when he stated that a great deal of trouble could usefully be taken by placing the materials in such a way that they would shape together. The difference between that and merely spreading the material was that the material itself was more nearly packed ready to take a load before the roller came on to it than if merely spread.

He knew that they were quite tired of what he had to say, and he would just conclude by saying how glad he was to see that Mr. Menzies fully recognised the value of modern methods of construction because of the facility with which patching might be done, and when he said that the stitch in time saved many times nine,

although he did not specify how many that meant, he did not think he could exaggerate in that matter. It also meant the employment of men who could intelligently do the patching, and the passing of the old method of employing anyone for this purpose. They must have men who could do this work properly, that was to say, men who were more nearly paviors than mere agricultural labourers.

One of the speakers had referred to the difficulties under which surveyors had to work. Nothing else than a callous waste of the ratepayers' money could result from the improper, he would not say direction, but obstruction, of the work of the surveyors who were not permitted to employ the men they should employ for patching work.

He would like to say one word as to the advent of the motor car which was mentioned on page 436 of the Paper. Mr. Grantham concluded that it was the advent of the motor car that had done this, that, and the other, and had made it necessary to go to so much expenditure, but he would like to point out that if the mechanically propelled vehicle had not been available to-day, an enormous addition to the work to be done by horses would have had to come on to the roads. They had reached a time when railways had found their limit with regard to the distribution of commodities for the population which had increased so enormously in the last thirty-five years, an increase which would have necessitated the use of the roads by some form of vehicle which would have worn them at any rate as much as they were worn to-day. Finally, he would say that they ought to be pleased to find that the roads were worn because it showed that they were wanted.

Mr. HENRY YORK (Fellow) said he would like to



explain that the gravel which was used on the road formed by Telford was of a very round pebbly nature, but it was bound together by loamy sand which made it more in the nature of concrete; it was very closely bound together and the stones were immovable.

Mr. R. F. GRANTHAM (Associate) said he first wished, on behalf of himself and Mr. Menzies, to say how much indebted they were to those gentlemen who had come there to speak on the subject. The discussion was particularly gratifying because it had been conducted on practical lines all through.

Mr. Vernon and Colonel Crompton both stated that the damage done to roads was not so much due to motor cars as to horses, but as far as he could recollect people never complained of the horses before motor cars came on the scene. In those days if any damage was done it was attributed to the narrow tyres of the wheels, and he was afraid that the blame had been thrown on the horses because people could not find anything else on which to put it. Mr. Vernon had made a calculation, but he could not see that that helped matters very much. He said that a pair of heavy draught horses in the process of travelling over every mile would hit the ground about 28,000 times, and each blow would have the force of half a hundred weight, but he did not give any comparison as regards the motor car. The weight of each motor car wheel was a great deal heavier than the weight on one horse's foot. It looked very terrific to talk about hitting a road 28,000 times with a weight of half a hundred weight, but he did not think when it was spread over a mile it was so dreadful as it looked.

Professor Henry Robinson had referred to a patent material in use in this country but he, the author, had

not seen it, and it would have been more interesting if he had stated where one could have gone to see it.

Colonel Crompton had said that the Papers were not up to date, but he could not find anything particular in his remarks that brought them any further, even if they were not up to date. He thought that Mr. Gladwell and Mr. Freyberg had omitted to note that Colonel Crompton had bestowed a good deal of praise on district surveyors. He said they possessed in their road surveyors, and particularly in their district surveyors, a body of men deserving of all praise: it was the county surveyors Colonel Crompton disparaged. He said as a rule county surveyors were not chosen for their road-making abilities, but for other qualities which had up to the present been considered of greater importance. The author thought that sometimes other people obtained appointments without any special knowledge of the particular subject for which they were appointed.

Colonel Crompton had referred to one method which he had not known before in practice, namely, that in narrow roads in Sussex ruts were filled in with tar material rolled and then tar sprinkled. Tar material when put down cost a good deal, but as he had not seen this particular method he would not say it was not a good way of repairing the ruts in a narrow road. Then Colonel Crompton had mentioned waterproofness, and laid stress on the effect of weather on the roads. He thought, if he recollected aright, that Mr. Menzies laid stress on the weather and the difficulties of contending with it, and he knew that in his own Paper he had said that roads in the future must be made waterproof. He accepted Mr Wakelam's correction that the whole length of the Holyhead Road had not been made in the way he had described. He also agreed with

him that to reinstate roads, that is to say, to pick up the material and put down proper foundations throughout the roads, would entail enormous cost. He thought Mr. Wakelam was quite right when he said it would cost something like six hundred millions, but he would point out that he had particularly said it could not be expected to be done in any time that could be named, though at the same time it would be just as well to endeavour to do it whenever there was an opportunity. That is to say, if a new bit of road had to be made up or if there was a chance of making a road which had got into a very bad state, and one had to remake it, his advice was, put in a good foundation.

He did not intend to recommend, as Mr. Wakelam suggested, jointing the wood pavement with cement, he only mentioned it as a process at one time in use, and no doubt the tarring of the present day was much the better plan.

Then as to the camber, Mr. Beaumont had disagreed with his recommendation of a cross-section gradient of one in forty. That was the camber he had given to two streets in that very city, the carriageways of which were 24 feet wide. One in forty in that width of road gave $3\frac{1}{2}$ inches rise in the middle, one in fifty gave $2\frac{1}{2}$ inches rise, which was very small. If they were to see those streets he did not think that they would consider them at all too convex. He could not agree with Mr. Beaumont when he said it ought to be one in sixty. He doubted whether the rain would be able to clear the dust and dirt off a road unless the cross gradient were steeper than one in sixty, which only gave a rise of about $2\frac{1}{4}$ inches in the middle of a 24-foot carriageway. To the eye such a road would appear perfectly flat, as two inches in twenty-four feet would be almost imperceptible.

In his Paper he had mentioned a longitudinal gradient of one in twenty, but he had only given that as a limit which it would be inadvisable to exceed, and although Mr. Wakelam had told them that the Paris Road Congress had laid down one in twenty-five there was not such a very great difference between one in twenty and one in twenty-five, although of course there were many places where one had to build steeper roads. He was as a matter of fact constantly making them one in sixteen; yet as regards main roads the utmost limit of steepness ought not to be more than one in twenty.

Sir Stafford Howard at the last meeting had said that a good foundation was a necessity, that patchwork operation on the top of a road did not pay, and that it was surely better to lay a good foundation by degrees and do it systematically and then tar over the road on the top to make it waterproof. He (Mr. Grantham) was in thorough accord with those remarks.

Mr. Harrison, in the communication which had been read that evening, said that limestone and Kentish ragstone made good roads, and that out of 137,000 tons of Kentish ragstone quarried in one year 70,000 tons had been used for road-making. He personally had not a good opinion of Kentish ragstone as a road material, as it ground very quickly into dust; it was used, but not for main roads or for roads with any considerable amount of traffic. Some of it was very hard and the best of it was hard enough to be used for facing seawalls, but from what he had seen of it he thought it ground up, and he would not be prepared to use it in his work. He thought that Mr. Harrison had been very fortunate if he had found that the carboniferous limestone made hard roads free from dust, because he had seen dust two or three inches thick in the summer

time on roads made with that material. There was no doubt that as a rule limestone ground down into dust and made mud.

As regards pot-holes he had been unable really to understand how they were formed. A little time ago the road behind the India Office in St. James's Park was re-metalled and rolled with steam rollers, and within six months part of that road was full of pot-holes, although it seemed a very good road with a good foundation. Those pot-holes were all over the road and he personally could not explain it, unless Mr. Harrison's explanation would meet the case.

In conclusion, he would only say how much obliged he was to those gentlemen who had taken part in the discussion.

Mr. MENZIES (Fellow) said he should like to associate himself with the remarks made by Mr. Grantham in his opening statement.

Mr. Vernon in his remarks had criticised the statement that motor cars created dust, and asked how could soft rubber do any such thing. He, like Colonel Crompton, however made no reference to the steel studs which one saw upon the tyres of nearly every motor car in the Kingdom, neither had he said anything about those abominable chains which one sometimes saw round the wheels. When they had a damp road, and by a damp road he meant an ordinary wet country road unprotected by tar or other preservative, together with these steel-studded tyres, they had present the three conditions which contributed largely to the destruction of the road; they had the iron on the tyre of the car, the water in the road, and the sand which was ground up by passing vehicles. They all knew that if they wanted to cut a stone they had to employ those three ingredients,

hence one of the reasons why motor cars did such an enormous amount of damage to our roads.

Mr. Vernon had suggested that he (Mr. Menzies) advocated gravel for main roads, but he was not aware that he had done so, and as a fact he advocated very much better material than that, if money were no object; it was merely a question of £ s. d.

Mr. Vernon had referred to the very unsatisfactory condition of a particular road under his charge, which led from Windsor to Staines, and had wished to know the reason why he so frequently found it in such a condition. He might say that it was one of the most difficult roads he had to contend with. It was on a level with the River Thames, with which it ran parallel for a mile or a mile and a half; it was a gravel road now being transformed into a granite one. Directly the river began to rise, the water came up under the bed of the road, so that it was always on the move, and whenever they got the river in flood the road was flooded, and he had seen it being torn to ribbons by a fast-flowing stream. They could all appreciate his difficulty in maintaining such a road in any decent state of repair. The other which Mr. Vernon referred to and which he said was in very good order, was made of practically the same material, but was on higher ground, and was not subject to the devastating influence that the lower road had to contend with.

With regard to Colonel Crompton's remarks, he would like to thank him very much for all he had so kindly said about the district surveyors, and also the other gentlemen who had spoken on that subject, but he must entirely disagree with him when he said he (Mr. Menzies) had not touched upon the climatic troubles that arose. Almost the very first words he made use of in his Paper were to the effect that excessive drought, and excessive rain were the chief factors in bringing

about the destruction of their roads; it made them into such a state that, when the traffic passed over them, they were torn up and brought into a bad state of repair.

Colonel Crompton had not told them how it was possible to make roads which with the present condition of things would last for ten to fifteen years without any repairs. He personally would be very grateful to him if he would enlighten him upon that subject. He happened to mention that gentleman's remarks on this subject to one of his road foremen, a man of pretty wide and long experience. The only thing the foreman said in reply was, "Well then, Sir, I suppose he is going to keep the traffic off." Colonel Crompton also repudiated his statements that the tyres caused sucking action, but call it by whatever name they liked, the fact remained that the tyres did displace the binding materials, and they shifted the smaller parts of metal from their places. That gentleman had also spoken of having everything in readiness to repair in the dry season. He would be glad if he could have told them how they were going to repair roads, thousands of miles he supposed there must be of them, where in the dry season there was often not a drop of water to be had for miles. How could they do it? It was not practicable. If he (Colonel Crompton) had in his mind that he was going to use some tarred material, for instance tar macadam, then if he stored it and kept it for any length of time, the speaker's experience was that it would certainly deteriorate by being kept and that a large proportion would have either to be boiled up again, or have something done to it in order to make it of use.

Colonel Crompton's views as regards repairing pot-holes might be all very well where the road was already faced with tar macadam, but if he were to attempt to repair the pot-holes in a gravel road with anything in

the nature of tar macadam, he would very soon find that he would get two holes where one only existed before, namely, one on the running-on side, and one on the running-off side; in a very short time the hard macadam would be standing up in a lump as the soft road on each side would wear away in no time. With all due respect to the holder, he thought that his views might be very excellent in theory, but when one had to put them into practice it was altogether another matter.

With regard to Mr. Harrison's remarks in the letter he sent, he fully endorsed everything that Mr. Grantham had said as regards the Mendip stone. He had seen it used very largely in his district, and so far as they were concerned it had proved anything but a success. He happened to be situated, as one gentleman described it, in leafy Surrey, and their roads were very much enclosed and overhung by trees. They could only get the trees cut back with difficulty and under certain restrictions. To go and ask a man to cut back two or three chains of his trees on either side of the road would be absolutely unreasonable, and very often nothing short of that would be of much use. His experience of limestone used under such conditions was that one did not get much dust off it in the summer but one got an enormous amount of dirt off in the winter; its great affinity for water made it in his opinion unsuitable for road purposes, though if they tarred it over it was another matter.

Mr. Harrison said that he would like to see legislation to prevent carts coming off arable ground with their wheels covered with mud, and there was no doubt about it, an enormous amount of harm was done in that way. He had an instance the other day of such a thing which demonstrated very forcibly the injury which could be done. A farmer was carting mangel-wurzels

off a field when the frost was just breaking, and his carts went over a gravel road for some short distance tearing the road all to pieces. The carts then passed on to a tar road, and they did no harm to it whatever. He had never actually had a similar case brought to his notice before, and it was a new experience to him, but it was certainly a thing worth recording.

With regard to Mr. Gladwell, who they all knew had had wide experience, he could only say he had tried his principle, or something very nearly approaching it, on one of his own roads, and that it certainly was a great success.

Mr. Yorke had made the remark that he had never heard of anyone keeping up roads set out under an enclosure award. He (Mr. Menzies) happened to be one of the gentlemen who had, for he had a road in his district which they were bound to keep up under an enclosure award, and they did so. That gentleman had also said that he did not approve of doing half a road at a time, in consequence of the seam down the middle. If he looked at the Paper he would see the speaker said if it was done the greatest care must be taken to secure cohesion, but it had an enormous advantage in that, if the road were wide enough, the traffic could be kept off the repairs while they were in progress. One of the greatest difficulties road surveyors had to contend with was the traffic passing to and fro the whole time they were trying to roll a road down, for it disturbed the stones while they were at work. If they could keep the traffic off it would be one of the greatest blessings they could enjoy. In conclusion he said he wished to thank the proposer and the seconder of the vote of thanks for their remarks, and also to thank those present for the kind manner in which they had received his Paper.

The PRESIDENT, in closing the discussion, said that he was sure they had all reaped great advantage from the information they had received both from the readers of the Papers and from the gentlemen who had so kindly come and given them the benefit of their experience. Personally he could not express an opinion on the construction of roads, but he felt that they all owed a deep debt of gratitude to the gentlemen who supervised and maintained the roads of this country. They had only to meet men from America and other parts of the world to hear that one of the first things that struck them on coming into this country was the extraordinary roads we had, and the marvellous way in which they were kept up for the carriage of every kind of traffic.

The advocates of motor-propelled traffic wanted too much all at once; the roads had been everything that was necessary for the traffic until some five or six years ago, when they were suddenly called upon to carry motor-propelled traffic. This was not a small order, for they now wanted a road with a surface which would carry the heavy traffic of which they had heard, and also one which would enable them to fly from one part of the country to another at the speed of an express locomotive, and it was impossible that such changes could be made without some interregnum of difficulty and complaint. The money could not be found for it to be done all in a moment.

They had now the advantage of the Road Board which was no doubt going to do a great deal with its £500,000 a year for the improvement of roads, but it would be some time before much of that money could be expended upon the amelioration of road surfaces, for, in the first instance, most of the money must be used for making the roads safe at corners, and so on. Applications for assistance to the tune of five

millions sterling had already been received from the local authorities for road purposes. It would be a very great advantage to everybody in the whole community if that five millions could be spent straight away in making our roads such as everyone would like to see them, but they must look at thing in a reasonable businesslike way and deal with it as opportunity offered, gradually getting the roads into a good state for the increasing traffic which must come upon them.

A great deal has been said by Colonel Crompton. One looked upon him, at least he did personally, as a great pioneer in electric lighting and electric traction. He had known him for some years, and he recognised him as quite a foremost authority on the subjects he had mentioned, but when he spoke in that hall on the subject of roads he thought it was something quite new. However, men of his type were always working for the good of the community in one thing and another, though perhaps he in particular was rather more enthusiastic and inclined to dash at conclusions than some, and had not given so much credit to our great road authorities as he might have done. That, however, was probably the type of man who inspired others to do more work than less enthusiastic natures would do. But they must look at the question in a reasonable spirit, and do all they could with their means, and all would agree that the gentlemen who were looking after the roads of this country were doing their utmost to make them a credit to the nation.

In closing the discussion he would like personally to express to Mr. Grantham and to Mr. Menzies, to whom a vote of thanks was passed at the previous Meeting, and to all those who had joined in the discussion, the best thanks of all present for what they had done in enlightening them on the subject of the maintenance and improvement of our roads.

The Meeting then adjourned.

THE ORGANISATION OF AGRICULTURAL CREDIT UNDER LAND & LOCAL CREDIT SOCIETIES.

BY ROBERT M. D. SANDERS (FELLOW).

*Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION held on Monday, 12th December, 1910.*

LESLIE ROBERT VIGERS (President) in the Chair.

INTRODUCTION.

On the 21st of February last, at the invitation of the Council of The Institution, I read a Paper on Land Banks in relation to Small Holdings, which gave a brief description of the operations of the German, French, Austrian, and Danish systems of organising land credit. Since then the problem of agricultural credit in a general sense, including the land or real credit of the owners and the personal credit of the farmers and rural inhabitants, has become one of increasing urgency, because many properties are now for sale owing to the incidence of the new land taxes, which fall more severely upon the holders of large than small estates.

When a great territorial estate comes into the auction mart, the position of the tenants becomes one of very great anxiety, if they are not rich enough to buy their holdings. They feel that the generous estate administration and kindly interest in their affairs, which are the characteristics of the English land system, may be

supplanted by the stricter business management of a new landlord who seeks a commercial investment, and the loss of a home surrounded with many old family associations may even have to be faced. I understand that it is the wish of the Council that we should consider methods for dealing with this altered situation in our land system, and how capital may be forthcoming to enable such tenants to purchase, while retaining the means afterwards to cultivate with success the freeholds acquired.

In England and Scotland few tenant farmers can obtain the full purchase price from private sources, and why should not the State grant them facilities for purchase as in Ireland? The Communal Tenancy Party say "No," and their opposition has to be considered. All who desire to arrive at a right conclusion of this controversy should study Mr. Jesse Collings' excellent book on *Land Reform*, and Sir Gilbert Parker's *The Land, the People, and the State*, which has just been published. The case made out by them in favour of ownership is, I consider, unanswerable. Let me, however, mention one objection which is now being freely advanced against ownership by the "Tenancy Party," namely, that a small farmer cannot purchase and retain his working capital. Why should this be? It is not the case in Ireland, and, as in Ireland, our scheme must provide that as far as possible the whole of the farmer's capital shall be free for productive purposes and the proper development and extension of his business. Lord Carrington claims that this is possible only under tenancy, but surely if ownership can be secured by an annual payment no greater than the annual rent under the tenancy, the purchaser possesses in his home a savings bank, the capital invested in which

may be mobilised and rendered doubly productive. Such is the experience of the peasant owners on the Continent as well as in Ireland. It is true, however, that more capital is required to work an area of land divided into small ownerships than when farmed by a few large tenants, but under the ownership system the production of the soil is much increased and a larger population can therefore earn a living. This additional capital may be found by the organisation of agricultural credit.

AGRICULTURAL CREDIT.

Credit is the mobilisation of capital with a view to increasing its efficiency. Capital invested in land and agriculture is usually "locked up," but by mobilisation it may become liquid and elastic and able to fulfil functions of which it is incapable in its present condition.

The problem before us is how to organise agricultural credit? The subject is of national importance. The more perfect the mobilisation of credit the greater is the amount of capital which will be set free for productive purposes.

THREE DIVISIONS OF AGRICULTURAL CREDIT.

The organisation of agricultural credit may be considered under three divisions:—

(1) *Land Banks*, or the organisation of real credit. A land bank is not a bank in the sense in which the term is generally understood. It is a mortgage debenture association, whereby a number of mortgages upon land are brought into a common fund, and bonds or debentures are issued, secured upon the whole fund, with or without certain collateral securities. These bonds or debentures are taken up by the investing

public, who do not concern themselves with the individual securities but look to the land bank.

(2) *Agricultural Banks*.—In these the credit of the farmer, founded upon his tenant-right, stock, crops or other chattel interest, is utilised on a somewhat similar plan to the land bank, except that the bonds or debentures are secured upon assignment of his tenant-right, stock or other chattel interest. These loans must of course be for a much shorter period than in the case of loans upon real property ; and

(3) *Rural Credit Societies*, by which the credit of the small-holder, agricultural labourer, the allotment holder, and villager is organised upon the plan of the Schulze or Raiffeisen Banks in Germany.

Thus by one or other of these methods capital may be found for the purchase of land and for its improvement, equipment and development, and the functions common to all are (1) the advancing of money to members for the particular object for which it is required, and (2) the acceptance of deposits and savings for investment from members. In this way borrowers and lenders are associated in a common interest resulting in economy and efficiency in administration, and a greater security for the repayment of loans is obtained than when money is advanced from outside sources. The governing principal in all is the same—"Co-operative credit"—each society, whether land bank, agricultural bank or rural bank, is a co-operative society, complete in its own organisation and capable of becoming a unit in the general federation of banks and societies.

Under the co-operative system of land banks on the Continent small holders have been able to borrow about 1,000 million pounds sterling, principally for the purchase of land and its improvement.

The co-operative principle is derived from the consciousness that the economic resources of the individual do not suffice for the solution of a given problem, but that it demands collective action to produce the economic force which is necessary. This "idea of association" we find in the earliest habits of the German people. It is to be found in the ancient village communities with their rights of common possession and the assumption of common burdens and duties. The substitution of the monetary system for barter brought into being co-operative credit societies in a primitive form of organisation. Thus the co-operative idea was not new to the German people; all that had to be done was to give the co-operative societies a form better corresponding to the exigencies of the economic life of the day. In this way co-operative land credit developed under Frederick the Great, following his famous proclamation to the Silesian landowners in 1769. Military considerations no doubt largely influenced his action, for he desired to retain his nobles and a strong agricultural population to support his army.

The success of the system then adopted led to the creation of no less than twenty-five great co-operative land banks in Germany. Organised generally for a province, or some other administrative unit, their object is to obtain for their members the credit they require on their land by means of bonds guaranteed by the landowners of the province collectively. These societies have flourished in a marvellous way in Prussia, where eighteen land banks, in 1908-9, had a bond issue of £81,657,000, while the latest return available for all Germany (1906) shows that the total bonds in circulation issued by the *Landschaften*, *Ritterschaften* and similar institutions of Germany covered a total loan on

mortgage of more than £157,350,000. This very considerable sum has been supplied to German agriculture, which it could not possibly have obtained from private or capitalist sources, at the low rate of interest of $3\frac{1}{2}$ per cent., with which these societies are generally satisfied.

AGRICULTURAL CREDIT SOCIETIES IN GERMANY.

Thus co-operative credit became, with the advancement of Prussia, a national institution, and it was not surprising to find that Schulze and Raiffeisen should have learned to apply this principle for the benefit of the poor man who, though unable to pledge land or property, had yet an asset which could be capitalised in his skill as a workman, his honesty and good name. In "*Co-operation at Home and Abroad*" Mr. Fay gives an interesting account of the German credit societies.

Schulze Banks.—The societies founded by Schulze operated principally in the towns, while Raiffeisen's were for rural credit. Both saw that the want of credit was the small man's difficulty, and credit could be provided if he organised with his neighbours to obtain it. At first the societies started by them were small groups in isolated

NOTE.—The German *Landschaften*, established in the latter part of the eighteenth century upon a royal or rather autocratic decree enforcing unlimited liability of the widest character, familiarised the Germans with the idea and practice of unlimited liability, even though the *Landschaften* dealt at first only with "noble" estates and have never reached the "small folk" to this day. Hence, at all events in towns and chief centres, they were prepared to accept the principle if carefully put in action, and Schulze-Delitzsch had little difficulty with his urban banks. Raiffeisen, it is true, had a much harder task in rural tracts, and was only successful after much toil, for peasants are always suspicious, and probably knew nothing about the *Landschaften* and their principles.—Mr. F. A. Nicholson's *Report on Land and Agricultural Banks for the Government of India*, 1895.

districts, but in 1859 Schulze organised the first congress of his banks, which resulted in the establishment of the general union of German Industrial Co-operative Societies, of which he was director up to his death in 1883. In 1867 Prussia passed the first co-operative law, which permitted the societies to be formed with limited liability. Raiffeisen at the same time gradually worked out his scheme of rural credit, but the principle of his societies was that of unlimited liability.

The Schulze Bank provides credit facilities for members only, the necessary funds being raised partly by share capital and partly by unlimited liability. Each member must subscribe one share, and in banks of unlimited liability one share only. The strength of the society therefore grows as its members increase. The shares are fixed at a somewhat high figure, generally over £6. The share can be paid at once or in instalments, all profits being credited to the share until it is fully paid, but it is to the interest of the member to pay up his share as soon as possible to become entitled to the dividend. The profits of the society are distributed in part to the reserve fund and the remainder among the shareholders. The reserve fund usually amounts to 20 per cent. of the capital. Entrance fees are added to reserve funds. The reserve fund can only be used to cover losses, and any reduction in the amount must be immediately replaced. Deposits are taken on—(1) Small accounts, either from members or non-members, the interest paid being from 3 to 3½ per cent., while 5 per cent. is generally charged on loans to borrowing members. (2) Ordinary deposits, which are of larger amounts and generally held on short notice. These deposits are only held by the larger societies with trained banking officials to look after the deposits.

(3) Drawing accounts which are not really deposits. They are worked under a system of cheques, and are in the nature of current accounts. (4) Special loans, often for improvement of premises, &c. (5) Public moneys such as communal savings banks funds.

The credit furnished by the co-operative bank is either in a direct form of a loan or in the form of a credit limit within which the borrower may draw as his needs arise. This is equivalent to the system of cash credit so well known in Scotland. In 1859 there were 80 of these banks with 18,676 members, in 1905 there were 1,020 banks with 586,595 members. In every town of importance in Germany there is a popular bank, and 60 per cent of the members avail themselves of the credit provided. The amount of credit granted in 1905 was equivalent to £150,000,000. This was distributed among its members as follows: Against bonds, £10,000,000; against bills, £35,000,000; against cash credit, £62,500,000; against trade discount, £42,000,000. The amount of credit granted per member was £250. These banks have trained the people to be their own bankers, teaching them self-discipline and prudence, giving the individual the benefits of association with a strong society. They have brought the people into business organisations and taught them to co-operate in other directions. The popular bank has all the virtues and none of the weakness of the money-lender or private bank, and being confined each to a limited area, there is a most perfect system of voluntary supervision.

Raiffeisen Banks.—In the winter of 1847-48 Raiffeisen formed the first association for the poorer inhabitants of the Commune of Weyerbusch. Transferred soon after as Burgomaster to Flammersfeld in the

Westerwald, he founded in this little Rhenish district an association for purchasing cattle for the peasants, and to obtain the necessary funds its members assumed joint and several liability. The cattle bought by the society were distributed among the small farmers who had not themselves the means of purchasing, and the cost was repaid with interest at a reasonable rate in five yearly instalments. They went on then to a service of money loans, which gave the association the character of a loan bank. Raiffeisen was next transferred to Neuwied where he soon after, in 1854, founded a society called the "Heddersdorfer Wohltätigkeitsverin." This society bought cattle for its members and interested itself in works of benevolence specially among the poor. In 1862 he founded the first of his co-operative banks at Annhausen, Rengsdorf, and Bonefeld, and a bank for the Commune of Engers, and for the upper part of the county of Wied.

Section 2 of the rules of the Annhausen Society reads as follows:—"The object of the Union is to provide "members with the money necessary, in the form of "productive loans at interest, so as to put them in a "condition to utilise to their own advantage the fruit of "their labour and to assure them a certain independence, "so that they may dispense with aid from third parties."

In 1876 he established at Neuwied the Central Agricultural Loan Bank of Germany, in the form of a company with liability limited by shares, which was to act as intermediary and regulating agency between those banks that had need of financial support on the one hand and the banks in which there was a surplus of money on the other, and a year later he established the Federation of Agricultural Co-operative Societies.

Since the death of Raiffeisen in 1888 this has

developed into an Imperial Federation of German Co-operative Societies, and fulfils the important mission of representing 19,000 agricultural co-operative societies, comprising nearly 2,000,000 members.

In the September bulletin of the International Institute of Agriculture, published at Rome, particulars will be found concerning the working of the Central Agricultural Loan Bank of Germany, and also an account of the working of one of the Raiffeisen credit societies which forms a unit in that organisation. The business of the Raiffeisen societies has increased recently by leaps and bounds, and in the past year reached the prodigious sum of £250,000,000.

People's banks usually following Raiffeisen's model have overflowed from Germany into nearly every other country in Europe. They almost invariably have a savings and investment department, and the savings from production in both rural and industrial centres soon find their way into the banks.

AGRICULTURAL CREDIT SOCIETIES IN ITALY.

An instance of remarkable results achieved is that of Italy, where agriculture was revived in a most wonderful manner by the organisation of an effective system of agricultural credit on these lines, but with some distinct improvements on the German system.

Like the credit unions founded in Germany by Schulze, the Italian co-operative people's banks are simply associations, by means of which artisans, peasants, small tradesmen, and, in fact, all classes of persons who, though honest and intelligent, could not otherwise obtain credit without submitting to every form of usury, combine to establish a local self-governing institution of credit to meet their requirements.

They are based upon the principal of self-help, and aim at developing habits of prudence and thrift in their members, by providing them with a profitable means of investment for their savings, while they seek to put down usury by the facilities which they afford for obtaining loans and advances of money at a reasonable rate of interest.

The members being at the same time both the proprietors of the bank and its clients have a direct interest in its making a profit, and also a sufficient inducement to keep the rate of interest charged on loans and advances within proper limits.

The pecuniary interest of each member in the association, through the shares subscribed by him and his contribution to the reserve fund, offers a material guarantee for the punctual repayment of his debts to the bank, and a moral guarantee is created by the restrictions imposed upon the admission of new members, and the sale or transfer of shares, which must be submitted to the board of directors for approval.

By these thrift receives every possible encouragement, which is important because, besides the material advantage to the individual, the savings from production represent financial resources capable of being reinvested in agricultural production. The surplus capital of the industrial workers cannot be placed to better advantage than in providing the cultivation of the soil with the means of adding to its production and thereby increasing the home supply of food.

AGRICULTURAL CREDIT SOCIETIES IN AUSTRIA.

In Austria credit organisation follows very closely on the German system. The Schulze banks are in the

towns, but in agricultural districts they have a character mainly agricultural, giving credit to the larger farmers and small proprietors on the security of their goods. Raiffeisen banks are very numerous in the rural districts. There is a credit bank to every 2,500 of the population.

Population of Austria	24,475,750
Schulze banks on 1st Jan., 1910	2,852
Raiffeisen banks on 1st Jan., 1910	7,116

Returns published in 1904 show the position of the Raiffeisen banks, from which I have taken the following figures reduced to English money :—

Number of banks, about	6,000
Reserves	£233,800
Credits granted	£4,537,000
Deposits	£14,000,000

Similar figures of the working of the Schulze banks are not available, but their operations are very large.

Being at the same time loan and savings institutions, the Raiffeisen banks in Austria have a great moral influence, rendering the deposit of small savings easier for the poorer or humbler classes. In Bohemia in 1908 the small deposits of the children and servants (Gesinde) amounted to nearly £250,000, or 15 per cent. of the total deposits from that province, and a few years before in Styria the deposits from the same classes came to over £300,000. In Austria the State has directly encouraged the formation of these banks by subscribing to their reserve funds.

AGRICULTURAL CREDIT SOCIETIES IN JAPAN.

In Japan co-operative credit associations are of rather recent growth, and follow the German system. They also act as savings banks.

In 1907, 44,314 depositors held deposits in the local credit societies of £155,000, being an average of nearly £3·10 for each depositor. About one thousand credit societies had issued loans to members to the amount of £850,000, of which £350,000 was outstanding at the end of the year.

SAVINGS BANKS AS FINANCIAL RESERVOIRS FOR AGRICULTURAL CREDIT.

According to Mr. F. A. Nicholson in his *Report on Land and Agricultural Banks*, the savings banks systems of all countries except France and England have developed a wonderful extension of popular credit since the excellent arrangements made for small deposits have attracted immense funds needing investment. These institutions in the United States, Switzerland, Germany, Austria-Hungary, and Italy are all local banks with free employment of their funds; the result of localisation and freedom has been the means of attracting to savings banks in the above countries about £700,000,000, of which about £330,000,000 has been lent on mortgages of real estate, about one-half, or, say, £160,000,000, being invested in rural loans of moderate and even small amount and up to thirty years in duration. Not only so but immense sums have been granted on loans on personal security for terms up to one year, and other large sums to public institutions, local boards, and the like, for works of public utility. Railways have been financed in America to the amount of scores of millions sterling by the funds of these banks, and in Europe very large sums have been advanced indirectly to the "small folk" through loans to popular banks and small credit societies, and by the discount or rediscount of the bills of such societies.

All this work has been done by savings banks proper and with hardly appreciable loss, owing not merely to good regulations, but to prudence in business and to the public spirit of trustees and others. The object of savings banks proper not being dividends, but simply the benefit of depositors chiefly through the safety rather than the fruitfulness of their deposits, they seldom fail, and when they fail it is seldom with disaster.

Localisation, free employment of funds, extreme watchfulness from without over the safety of all operations, and public spirit and unselfishness within, seem to be the chief features of savings bank work in the countries of Europe and America.

CO-OPERATIVE CREDIT IN GREAT BRITAIN AND IRELAND.

In the British Isles there are no land banks or agricultural banks such as I have defined, but co-operative credit in the form of people's banks on the Raiffeisen model was introduced into Ireland by Sir Horace Plunkett, under the auspices of the Irish Agricultural Organisation Society, in 1895, when the first society was established at Doneraile. Within ten years 240 similar societies were in existence, with a total membership of 15,000. Loans granted 8,440, totalling over £50,000; local deposits £16,708, which were supplemented by loans amounting to £29,672 from the Department of Agriculture, Congested Districts Board, and Joint Stock Banks. The expenses apart from interest only come to £275 14s., and a nett profit of £550 was added to the reserve, which amounted to £2,322.

Since then their increase in numbers and growth of business has not been quite as great as might have been expected, and this may be partly accounted for by the

attitude displayed by the Irish Government towards the societies. The increase in deposits is a healthy sign, and there is a great opening in Ireland for such societies.

Number of banks	. . .	268
Membership	. . .	17,403
Loan capital	. . .	£32,861
Deposits	. . .	£20,261
Number of loans granted	. . .	14,851
Amount of loans granted	. . .	£56,004
Loans outstanding	. . .	£50,343
Expenses	. . .	£513
Net profit	. . .	£572
Reserve	. . .	£2,950

In England the movement has been slow. In 1899 the Co-operative Banks Association was established, and was instrumental in forming a number of village credit societies and several town co-operative banks in London and the provinces. But the financial support accorded to the association was inadequate to provide for any very extensive scheme of organised credit, and its principal work has been to create a public interest in the movement, and in this it succeeded to a considerable extent. In 1904 the association amalgamated with the Agricultural Organisation Society, which now runs a special department for encouraging the formation of village credit societies. Their model rules are excellent.

SMALL HOLDINGS ACT AND CREDIT SOCIETIES.

Under the Small Holdings and Allotment Act, 1907, the Board of Agriculture and county councils may promote the extension of and assist societies on a co-operative basis for credit banking, and, with the consent of and

subject to regulations made by the Local Government Board, may make advances to co-operative credit societies or guarantee advances made to them. Mr. Devine, the able secretary of the Urban Co-operative Banks Association, says—

“ Now whilst all of us appreciate the patriotic motives which animated the insertion of these clauses, many are inclined to be chary in availing themselves of their assistance for fear of their operating against the spirit of independent mutual self-help and prudent management, which is the dual basis of successful co-operative effort.

“ Economic co-operation needs money, but that is not its greatest necessity. The object of co-operation is to help people to help themselves, not to carry them on its back, or advance money without any security.

“ Its primal requisite is men and women willing to unite for mutual aid, and to voluntarily accept conditions (including the provision of security and the acceptance of inspection and supervision) which will help them to earn an honest livelihood whilst precluding them from exploiting one another.

“ It is useless to impose credit societies upon any district where people of this type cannot be gathered together, and therefore those county councils which decide to put these permissive powers into force will require to be very careful in responding to applications for their assistance in this direction.”

It is difficult to get a number of small men to unite to form a society without somebody to lead them, but the solution might be found in bringing together into one great organisation the various divisions of credit, and then landowners, capitalists, and agriculturalists large and small would find it mutually advantageous

to work together for one common purpose in such an organisation.

Indeed, in those countries where co-operative credit has made most strides it was preceded by organised land credit among the nobles and smaller landowners, and England credit societies are, I venture to think, unlikely to make any great headway unless established in connection with a scheme of peasant proprietorship.

CAPITAL FOR ENGLISH LAND PURCHASE.

Mr. Jesse Collings strongly advocates that the State should make advances direct to the tenant, as in the case of Ireland, through a State department or the Board of Agriculture. His view, in which I fully sympathise, is that the English farmer is as much entitled to exceptional aid from the Treasury as the Irishman, but I do not think that he has fully considered all the disadvantages attaching to Treasury management of land sales. In Ireland we find that political influences affect the question, and at the present moment land purchase has been completely blocked by the action of the Government in refusing to find money to complete existing contracts and in placing obstacles in the way of future sales. Contracts entered into with their landlords by about 200,000 tenants, representing purchase money to the extent of £50,000,000, are hung up to suit the convenience of Treasury finance, and many of these contracts may be postponed for ten years. This state of things produces most demoralising effects among the agricultural community and upon land credit generally. If it is desired to maintain land credit at a high level contracts must be respected not only by the parties concerned but by the State, and all contracts dealing

with land should be rapidly completed. I am sure English agriculturalists would never put up with the inconvenience of the present Irish land purchase system. Nevertheless they should have and are entitled to cheap credit, that is to say, the repayment of loans for land purchase by annuities of no greater amount than 4 per cent., repaying principal and interest for a period of years which would depend upon the rate at which the money could be borrowed, and which would perhaps not exceed fifty years.

Moreover, the management of the land stock by which money is raised for Irish land purchase has not been satisfactory, and full advantage has not been taken of the State credit which Ireland enjoys. In Ireland the savings of the peasants are extremely large, and these are likely to be increased very considerably with the extension of land purchase. The people have few opportunities of investing their savings. The great bulk of the peasants' savings are deposited in the Post Office and Joint Stock Banks. In the latter the interest paid is not more than about $1\frac{1}{2}$ per cent. No attempt has been made to utilise Irish savings for land purchase, the management of Government land stock being centralised in the Treasury. The people are not in touch with it as an investment, although at the present price it would yield $3\frac{1}{4}$ per cent. with absolute security. The Treasury have not created a free market in land stock but are in the habit of purchasing for Government departments at a discount. Nearly the whole of the recent stock created, namely, 3 per cent. Birrell land stock, is held by the Government, having been taken over by them at a discount of 10 to 12 per cent., although eventually it will be paid off at par by the Irish tenant purchasers or, should they default, by the Irish local authorities.

There are many people who do not want to purchase stocks which are liable to fluctuate, but want to place their money in safety where they can get back £100 for £100 invested. This is why the Irish peasants deposit money for long periods in the local banks at low interest. Bonds to be redeemed at par, issued at 3 per cent. interest, would probably always command about par value if circulated among these people and might become a popular investment for savings, and in this work the credit societies might perform useful work. Attempts to induce the Treasury to favour such a plan have not been successful.

NATIONAL LAND CREDIT SOCIETY.

An institution founded by people directly interested in the land would act with much greater freedom, and for that reason among others I suggest the establishment of "A National Land Credit Society," or bank under Government control and supervision, the management of the society being under a board of directors. This society would form the centre of the financial organisation of all agricultural and credit societies which, in their turn, would supply it with funds for its loan issues through the savings banks departments, which would be connected with the societies.

Credit organisation abroad teaches that enormous savings may be attracted to the societies if proper safeguards are established for securing the investments of the societies. The advantage of using the savings banks deposits for land purchase is that a much larger number of people become interested in the land and in its development. This adds great strength and stability to the social structure. The chairman of the society might be nominated by the Government, one director by the

Bank of England, one director by the President of The Surveyors' Institution, two directors elected by the county councils, and seven directors elected by the shareholders. The shareholders should as far as possible be persons directly interested in the success of the movement and the local credit societies should all become shareholders. There should be a large share capital, but dividends should be limited to 5 per cent., and all surplus profits carried to a reserve fund. The State should start the bank with a contribution to the special reserve fund, which should be set aside for the special purpose of guaranteeing the bonds, debentures, and obligations of the society. The business of the society would be as follows :—

1. The granting of loans to occupying tenants and others for the purchase of lands, as in the case of Ireland, the loans to be repaid by 4 per cent. annuities repaying principal and interest over a term of years.
2. The issuing of guaranteed land bonds or debentures paying 3 per cent. interest, these bonds or debentures to be secured upon—
 - (a) The aggregate mortgage loans made to the purchasers of land ;
 - (b) A county guarantee fund similar to the guarantee fund created under the Irish Land Purchase Act for securing guaranteed land stock ;
 - (c) The special reserve fund of the bank ;
 - (d) The consolidated fund.
3. The granting of loans for long or short terms to agricultural banks, credit societies and in-

dividuals for productive purposes connected with agriculture and industries.

4. Receiving from local societies deposits and savings for investment.
5. The organisation, management and supervision of local credit societies.

The capital of the National Land Credit Society should be large, say, one million pounds to commence with. The State should grant to the society £500,000, £250,000 of this and an equal amount from the society might be invested in the special reserve fund above referred to. Apart from loans and advances made in connection with the business of the society, all moneys should be invested in trustee securities alone, and the business of the society should be strictly confined within certain limits.

The land purchase business might be carried out upon lines somewhat similar to that in Ireland. The landowner and the tenant would execute an agreement setting out the price at which the land was to be purchased; that agreement would be forwarded to the society. On being satisfied with the security the advance would be sanctioned, the tenant would then become fee simple owner of the land subject to the annuity, and the society would pay off the landowner. Special facilities for transfer should be granted, exemption from stamp duty on conveyance, &c., as in Ireland. If the society were of opinion that the holding was not security for the full advance, some collateral security might be accepted from the tenant, the vendor or from the local credit society by way of guarantee deposit or otherwise. This collateral security would be held until so much of the advance had been paid off as to reduce

the loan by the accumulation of the sinking fund within the margin of security. As the stock raised to meet the advance would be guaranteed by the county councils there should be a provision enabling each county, through its county committee, to object to the granting of any loan which in their opinion was not sufficient security for an advance. Before the sanctioning of an advance the list of advances proposed for each county should be sent to the county committee, giving them the power to serve notice of objection within one month. In every case where the county committee might make objection a special valuation should take place by an independent valuer, who should report as to the sum which it was prudent to lend.

For the first ten years the Treasury should agree to purchase yearly at par at least one million of the 3 per cent. guaranteed land bonds, the society undertaking that a certain proportion of the savings deposits should be invested in Government securities, to be held in trust for depositors. The effect of such an arrangement would secure to the society a certainty of at least a million a year in cash to meet land purchase operations while at the same time depositors would have good security for their deposits, and the loans would be floated without any dislocation in the money market, such as is sometimes caused by the issue of Irish Guaranteed Land Stock by the Treasury.

The National Land Credit Society would encourage the establishment of agricultural banks and credit societies. Subject to satisfactory guarantees these banks and societies would be granted cash credit up to a sum which should enable business to be started. The cash credit could be increased in amount against approved loans to members. In the case of agricultural

banks, loans to members might be secured upon goods, cattle, crops, tenant-rights or other assets as well as personal security. A law exempting such loans from the Bills of Sale Act might be passed. Loans to credit societies would usually be on personal security only, namely, the unlimited security of all the members of the society. The National Land Credit Society would probably make loans to agricultural banks and societies at 4 per cent., and these would lend out to members at $4\frac{1}{2}$ per cent. or 5 per cent. but in no case exceeding 5 per cent. These societies would have a savings bank department. All savings not specially intended for local circulation would be forwarded to the National Land Credit Society for investment. The general supervision and financial management of the agricultural banks and credit societies should be undertaken by the National Land Credit Society, and all regulations approved of by Government authority.

CONCLUSION.

In this way it seems to me that land credit may be organised to supply the want which is felt by the farmers and small holders who desire to purchase their land, and by all agriculturalists and workers in rural districts who desire cheap credit for carrying on their particular industries.

It embraces the main principles which appear to support the great credit organisations abroad. The question concerns the landowners of Great Britain, both large and small, who may with advantage apply collectively similar principles to the solution of the land problem here without feeling that it is an untried experiment. The agricultural interest would be greatly strengthened by an increase of small occupying owner-

ships. More than £1,000,000,000 is now invested in the ownership of agricultural land in Great Britain and more than £300,000,000 in the stock farming capital and tenant-right of their tenants.

Let it not be supposed that I advocate the universal creation of small peasant ownerships to the exclusion of all other systems of tenure. On the contrary I hold that large and small ownerships and occupations ought to be mixed as they are in other countries. They help each other in labour, exchange of produce, and many other ways.

The land purchase system required should be both elastic and voluntary. All impediments which now obstruct free sale should be removed, registration of title should be established with easy and cheap transfers, and the "wheels" of land purchase so "fitted" that the economic supply and demand for agricultural land may be easily satisfied.

Some amendments in the law would be required, which I venture to suggest in a Memorandum which will be printed in the Appendix.

I have tried to explain how these objects may be obtained while principles of thrift and good fellowship are at the same time taught and encouraged.

I thank you for the kind way in which you have listened to me.

Mr. J. H. SABIN (Fellow) said he had much pleasure in proposing a hearty vote of thanks to Mr. Sanders for his interesting and instructive Paper. It was to be regretted that the number of Members present on that occasion was so small, but, on the other hand, they must remember that a very considerable number would peruse the Paper in their own homes, and he hoped that by its wide

distribution some effect would be given to the suggestions which it contained. He regretted that party politics should have been introduced either into the Paper or into the discussion which had appeared in the public press. Ownership and tenancy were not antagonistic, and, as Mr. Sanders had suggested, the two might well run together. While in some districts ownership might be possible, in others it was clearly not so. Large owners as a class were not likely to cut up their estates for the purpose of selling to small purchasers, nor could they imagine the State interfering and compelling them to sell. He assumed that it was with the desire of propitiating large owners that under the Small Holdings and Allotments Act, 1907, county councils were not permitted to purchase land compulsorily for the purpose of reselling.

In his opinion it was possible to have credit banks without confining their use to those disposed to purchase their holdings; and he was supported in that suggestion by no less eminent a politician than Mr. Balfour, who, in the preface to Sir Gilbert Parker's valuable book, qualified his general remarks with the following sentence: "It is a mistake to suppose, as many do, " either that small ownership is the *natural* organisation of rural life, *i.e.*, the one which would prevail " but for antiquated laws and bad tradition, or that if " it were suddenly established by a stroke of the pen " it would immediately work smoothly and automatically to the general advantage of all concerned. " This is too sanguine a view."

The establishment of credit banks should be identified with the merits of the question itself; and they were greatly indebted to Mr. Sanders, not only for having put forward a clear theory of credit banks, but

because he had also framed a scheme for their establishment. The scheme at present was merely a draft, but when they had studied its general outline he thought they would agree that the scheme was practicable if sufficient public interest could be secured in the matter.

He could not agree that the State should advance the whole of the purchase money. It was true that it was done in Ireland, but they must remember that that country suffered under dual ownership, all improvements being done by the tenant, so that while the interest of the landlord might have been purchased for, say, £500, the tenant's interest might have been worth another £500, and the two together would form a sufficient security for the £500 advanced by the State.

In England, however, the tenant-right had comparatively little value and would be of little use as a security, as a dishonest occupying owner might easily impoverish the land to such an extent that when the society or bank took possession they would find that the actual value of the land was less than when the occupation began.

To his mind one of the most important features of these banks was their local character. It had been his lot lately to let farms to a number of men, and having met some forty or fifty of them he discussed the terms on which a lease should be granted, and he was surprised to find how much they knew of each other's business, what each had got in the way of security on his farm, and what was his particular credit. If fifty or sixty men were capable of meeting together for the management of farms, they could also be depended upon equally to co-operate in the management of a bank.

As there were gentlemen present who had come

long distances and who should have the opportunity of speaking, he would not detain them longer than to propose a hearty vote of thanks to Mr. Sanders.

Mr. J. A. EGGAR (Fellow) said he had great pleasure in seconding the vote of thanks to Mr. Sanders for his excellent Paper. Before he felt competent to criticise it in any way he would have to understand more about the management of banks than he professed to do at the present time. That a great deal might be done in the future with regard to co-operative credit he felt confident.

He saw his friend Mr. Wolff present—a gentleman who was an expert in that subject—and if he would speak presently they would hear much that might be of assistance to them.

He gathered from Mr. Sanders that agricultural banks were of two kinds; land banks for providing money for the purchase of holdings, and credit banks for supplying farmers with the capital necessary for carrying on their holdings. With regard to the first, he must agree with Mr. Sabin that it would be hardly safe for the State to advance the whole of the money. They all knew that two-thirds was the limit usually allowed on mortgage; that proportion should not be exceeded without very serious consideration.

Mr. Sanders had said in his Paper that a law *might* be passed exempting from the Bills of Sale Act loans obtained from agricultural credit banks. He would prefer him to alter *might* into *should*, because that was one of the points that ought to be altered by Act of Parliament. At the present time a farmer was the only man who could not get credit on his stock-in-trade, and he thought that if the Bills of Sale Act were altered it might be a great benefit, especially co-operatively.

As many of them knew he was greatly interested in the agricultural co-operative movement, and one of its chief aims was gradually to educate the farmer to pay cash. It would take a long time, because many persons who would like to obtain the better terms offered by co-operation still continued to go to dealers, and pay a much higher price than they need have done, because they had not the cash to pay at the proper time. They said they did not want a co-operative society, but in most cases their real reason was their inability to pay cash. The creation of agricultural credit banks and the alteration in the Bills of Sale Act would both be of great assistance to the co-operative movement.

He had not come prepared to speak, or to criticise the Paper, but he thought Mr. Sanders was to be congratulated on having put before them much food for thought, and he believed that when they had had time to consider his suggestions many of them would bear good fruit. At all events the Paper would start them thinking, and in the end means would be devised to assist farmers in the purchase of their holdings. He could not for his own part see that a universal system of ownership would prevail, but it was a matter they should all consider, and he personally would be glad indeed to see an increase in the number of occupying owners throughout the country.

He had much pleasure in seconding the vote of thanks.

Mr. H. W. WOLFF (Visitor), being called upon by the President, observed that he gladly joined his voice to those already raised to thank his friend Mr. Sanders for bringing forward the important subject dealt with in his

Paper, one of the most pressing of the present day. For he was satisfied that the provision of money, ample money, for the twofold purpose of settling people on the land and of making agriculture once more a fully remunerative calling, was one of the most crying wants of the hour. However, beyond that point, he regretted to have to own with all frankness that there were only very few points on which he found himself in full agreement with the reader of the Paper.

Above all things he was afraid that Mr. Sanders would do well to revise his presentation of facts. Evidently on such ground he had been led a little astray. He would instance only a few points.

Mr. Sanders appeared very much in love with the German *Landschaften*, and attributed to them a great deal that was not really their due. He might explain that during his residence abroad he had, as an owner at the time of an estate in Silesia, lived under the oldest and one of the best administered of these bodies, and in fact—though disabled by the circumstance of his not being a German from taking all the active part attaching to the position—he had formed part of it. It was quite true that the *Landschaften* provided enormous sums of money for mortgages on land, but he was not sure that they provided it quite to the extent that Mr. Sanders desired to see adopted in this country. There was, by the way, nothing either distinctively “noble” or advisedly “co-operative” about *Landschaften*, and it was a great mistake to suppose that they limited their ministrations to “noble” estates only. In his own whilom parish *Landschaft* money had been lent by the most aristocratic of *Landschaften*, to wit, the Silesian, on small peasant properties, as long ago as in the sixties, as he knew, because his opinion had then been taken

confidentially on such properties. And since then several *Landschaften* had been formed for the express purpose of making advances on peasant land. Even in Silesia, at the time when Frederick the Great introduced the *Landschaften*—mainly as a means of propitiating the ruling caste of the inhabitants of a province just conquered from Austria and labouring under great want of money, and of attaching it by pecuniary interest to his crown—many of the *Rittergüter*, as they were then called (otherwise than as a title of courtesy the designation has now been done away with and the privileges once attaching to them have been abolished) were in non-noble lands. The privilege was then restricted to them for purely practical reasons, because such properties were actually the only ones legally in a position to be pledged by mortgage.

It was furthermore incorrect to say that it would be extremely difficult to raise the money lent by *Landschaften* on mortgage by other means. The money could be raised, even before the host of specific “mortgage banks” of the present day had come into the field; and numbers of owners actually preferred to raise it from private capitalists, because the *Landschaft* lent only to the extent of “three-sixths” (so the rule ran) of its own valuation, which was known to be a very moderate one. As a rule now, but formally as an act of favour, the mortgage was carried to the length of “four-sixths” of the said valuation; but that valuation represented at most only half the market value, and owners in want of money naturally did not like to proclaim so low a valuation. It might make it difficult for them to raise further money on the top of that loan.

He was sorry to see that Mr. Sanders, intentionally or unintentionally, appeared to lend countenance to the

very heretical supposition unfortunately favoured in this country, that the Raiffeisen banks were the only type of banks qualified to prove of service to agriculture, and that the far more richly endowed and more active and businesslike Schulze and Luzzatti banks were purely "town banks." That was a great mistake. The Schulze and Luzzatti banks had advanced, and still advanced, very materially larger sums to agriculture than the far more numerous but incomparably smaller village banks of the Raiffeisen and Wollemborg type. The peculiar distinction and distinctive glory of the Raiffeisen banks was that they could stoop down to the lowest grade of the social or economic scale, and come to the relief of the very poorest. But they were not at all adapted to the cases of our own medium and larger farmers. To such they could bring the desired help only by means of banks of the Schulze or Luzzatti type. Unlimited liability—retained in a steadily declining degree in Germany, avowedly as a German tradition—was not by any means indispensable to them. Limited liability had been made permissible in Germany, not in 1867, as Mr. Sanders had stated, but only in 1889; and from that date forward the number of limited liability banks of the Schulze-Delitzsch type had kept slowly but steadily increasing. Since, from what might be only an unintended omission in Mr. Sanders' account of Schulze-Delitzsch banks, the inference might be drawn that those banks did not raise funds by means of deposits, he felt bound to explain on their behalf that there were no co-operative banks in the world which set greater store by the taking of deposits than those very banks. Schulze's precept to them was that they should make themselves the generally preferred savings banks of their own particular districts.

He would not pursue his corrections of not quite accurate statements further.

On two points he was glad to say that he found himself in complete agreement with Mr. Sanders. One was the reprehensibleness of making the people's deposits in the savings banks a mere convenience to the Treasury. Mr. Gladstone, the author of the Savings Banks Acts, had publicly owned that the object of the compulsion exercised to invest savings banks moneys exclusively in Government securities was "to give the Chancellor of the Exchequer a financially strong arm, and to make him independent of the market." Everywhere else—except only in France, which had in the matter proceeded *pari passu* with this country—savings banks money was deliberately employed for the benefit of the classes which had first contributed it, more specifically for housing purposes. England ought to come to that.

The other point was the mismanagement instanced by Mr. Sanders of keeping the Irish land stock all in the Treasury. He himself was not at all enamoured of the latest Irish land legislation, which was to have saddled them with a loss of £12,000,000, but in truth burdened them with much heavier outgoings. One evil result of such uneconomic proceeding was to be found in the demand echoed in Mr. Sanders' Paper, that what had been most wastefully done for the Irish peasant, at the cost of other taxpayers, should now be done also for the English small holder, at an even very much heavier sacrifice to the rest of the population. State money was simply taxpayers' money, and those who cried out against the Budget should not demand that such money should be extravagantly dealt with. However, locking up land stock in the Treasury was in any case a

mistake. That indeed opened up a much wider question with which he had endeavoured to deal in the columns of *The Economist*, and on which he hoped shortly to plead the cause of reform, he trusted with ultimate success, elsewhere. Englishmen made the mistake of treating their Government securities as the special preserve of the rich, making purchase and transfer costly and difficult. There were only about 200,000 holders of Consols. The French had with admirable results made their *rente* an investment for "the million." There were about 4,500,000 holders of that stock. That had greatly widened the market, raised and steadied the price, and as powerfully stimulated thrift. Consols ought to be dealt with in the same manner.

There was one other question with regard to which he up to a certain point occupied common ground with Mr. Sanders. Wherever the conditions rendering it practicable were forthcoming, he decidedly preferred ownership to mere tenancy. But it was a mistake to contend that personal credit, such as was here referred to, was practicable only for the benefit of owners of the soil and not of tenants. In Italy, on agricultural ground, co-operative personal credit was dealt out *mainly* to tenants, down to very small folk, and with the very best results. So it was in Venetia, and more specifically in the Lodigiano, and in the districts of Rovigo and of Cremona, the latter being in Lombardy. And although in Germany tenancy was not as prevalent as in Italy, the very last Co-operative Congress in that country which he had attended, at Nauheim, last September, was held in a district where tenancy predominated and where farmers avowedly looked upon it as yielding more ample returns in profits than ownership, and yet benefited greatly by credit banks.

But, generally speaking, he was in favour of "the magic of property." Only it was not in all cases possible to admit that system. What the settler required above all things was *working* capital, and to the command of that he must if necessary sacrifice possession. Were they to provide the settler with both the full purchase price of his holding, and his working capital as well?—and all by credit! That would be extremely unbusinesslike. He had never in all his wide experience come across a case of such twofold liberality. Even of the provision of the full purchase price of the holding, he had, outside Ireland, met with only one instance, and that was among the Poles of Prussia, who, being persecuted and oppressed by their Germanising Government, had from race patriotism found themselves impelled to make special efforts, which had proved successful—for the Poles were born co-operators—the wealthy providing the necessary money, through their co-operative banks, to advance to settlers that third part of the purchase money which the public institution, the Rentenbank, was not entitled to advance. Race patriotism, once more, drove the borrower to be scrupulously honest and to repay the advances within the stipulated time.

It must also be remembered that many settlers avowedly preferred tenancy, which enabled them to work up their way from a small holding to a bigger and so on to the top of the ladder. He would also once more remind his hearers that the Liberal Government's Small Holdings Act insisted upon tenancy only where land had been compulsorily taken from its owner, and must therefore in simple honesty be tied down to the particular use for which it had been seized.

He came now to the main point of Mr. Sanders' essay, the proposal which he had submitted for carrying

his ideas into practice. Having only just seen Mr. Sanders' Paper he would not enter into the particulars of his scheme, very ambitious as it was except in respect of the money for which he asked for its execution. At that point the scheme appeared to him modesty itself. One million pounds could not go far, even when reinforced by another million to be loaned by the Treasury under certain conditions. One million was the very sum with which the agricultural account, now converted into the Agricultural Bank of Egypt, catering in the way of agricultural credit for one province only, began. Its capital now stood at about £3,500,000, and the authorities were talking of establishing co-operative banks in addition to supplying the requisite funds.

The Prussian State Endowed Bank, formed to render similar service, began with 5,000,000 marks. Its capital now stood at 75,000,000 marks. And that sufficed only because the banks supplied by it, having grown weary of Government hectoring and meddling and peddling, were collecting deposits on a large scale, so as to make themselves independent. In 1894 the French Government proposed an endowment of 1,000,000 francs for "agricultural credit." It was now employing a capital of more than 100,000,000 francs, taken from the Bank of France at nil per cent.

The speaker's great objection to Mr. Sanders' scheme was that it appeared to mix up two essentially distinct things, which business principles required should be kept rigidly apart, namely, long-term mortgage credit, locking up capital, and personal credit for working purposes, which must necessarily be of much shorter duration. His "National Credit Society" was to cater for both purposes. And Mr. Sanders wanted to compel the credit

banks, formed as he himself admitted to dispense personal credit, to link their own liability, which required above all things liquid resources, with that of the mortgage-dispensing land bank, by taking shares in it. No good results could possibly be achieved by such intertwining of heterogeneous business. It was a curious coincidence, perhaps, that this same question of bringing personal credit, practised by co-operative banks, to the assistance of institutions dealing in mortgage credit, was at the present time occupying the attention of credit experts in Germany. It had been debated with great thoroughness for some years back. And all the "personal credit" institutions not actually dependent upon Government assistance, and thereby compelled to coquet with a Government suggestion, had pronounced absolutely against the proposed dabbling in other than their own legitimate business, as involving serious dangers.

The two subjects would have to be kept wholly distinct and dealt with each in its own appropriate way.

In support of the land settlement proposed, the speaker was ready to admit that, in a direct or indirect way, by advances or guarantee, State help might be asked for and might legitimately be given. This was an object of public benefit, by which all taxpayers would find themselves gainers. And the work to be undertaken was so large that a longer purse, or a more substantial guarantee than a public society or joint stock company could command, was likely to prove necessary. Only let them beware of following the unbusiness-like and needlessly extravagant example set by Mr. Wyndham's Act in Ireland. No money loss need be incurred. There were various schemes of this kind in operation, working more or less well, more particularly in Germany. Only it was a mistake to

suppose that the *Landschaften*, on which Mr. Sanders seemed so hot, served this particular purpose, or were qualified to serve it.

Interesting experiments were being carried on in Pomerania, and a very interesting proposal indeed, aiming at the very object here desired, had been put forward by the Chairman of the East Prussian *Landschaft*, to be worked outside the proper sphere of that institution. The scheme to which he gave the preference, because it seemed best to answer its purpose, was that of the Prussian *Rentengüter*, which had yielded admirable results. That scheme required no expropriation, and no loss of money. Landlords were very ready to sell under it, because it secured them better prices than any other method of selling. The landlord was expected to prepare his own scheme in respect of his own property, providing the requisite buyers. Such scheme he submitted to the Government authority, which after that—in cases that it approved—undertook all the necessary work of surveying, of carrying out legal requirements, verifying the title under a compulsory land register, which was of immense advantage, and the like, at a nominal fee; but on the other hand it was careful to see that all the proposed new holdings were well laid out, compact, with easy access, good roads, adequate water supply, and so on. It also took care to enquire if the proposed settlers were competent to undertake the management of those holdings, for it would allow none other. In this way the new holdings were certain to become a practical success, as in fact had been the case. All this being done, the vendor was paid, not in cash, but in land bonds, which circulated like Consols or the land bonds of the *Landschaften*, being taken as a recognised security. They were a

little under par just at present, like Consols, in sympathy with the general market. But even so, the higher sale price obtained compensated the vendor. The purchasers relieved themselves of their debt by a terminable rent-charge spread out over a long term of years.

So far the speaker was ready to admit the desirability of State intervention. But in respect of personal credit—by co-operative banks—the less people had of State interference, the more they were thrown upon their own resources and made to employ their own efforts, the better would they fare. There was ample money for those purposes in the world, if they would only supply the proper security. There was so much money in the world, as the late Lord Salisbury had put it, “that you cannot get money for it; it is overflowing in the coffers of the bankers.” A director of one of our largest banks had informed him only the other day that his bank held not less than £72,000,000 in deposits.

From such joint stock banks money was ready to be loaned if things were only made convenient for them. It was so loaned, in a purely business way, in Ireland. And it was so loaned even in India. However, the main source for a supply of funds for such banks must needs be deposits. The credit banks in Ireland, referred to by Mr. Sanders, supplied a good object lesson in respect of the worthlessness of State help. Those banks were formed under his own teaching. And although he could not pronounce them altogether perfect, he had a very high opinion of them. Mr. Sanders, however, was altogether mistaken in attributing their success and progress to “the attitude taken up by the Irish Government.” It was altogether the other way. Mr. Sanders should read the *Irish Homestead*. They had had that

question out the other day before a Select Committee of the House of Lords, where it had been shown that the Irish Government had done what it could gratuitously to damage those banks. (Mr. SANDERS: T. W.!) Yes, T. W.! But it began before his time. The banks had drawn something under £19,000 from the Government. A high authority had owned to him that that £19,000 "might just as well have been chucked into the sea." On the strength of its support the Government interfered injuriously. And rightly — partly under his urging—the banks had come to the conclusion that it would be preferable to throw off Government shackles and rely upon deposits. They were doing so.

Precisely the same thing had happened, on a much larger scale, in Germany. The large host of agricultural banks, which had grown up on Government help, found out in course of time that such help had to be paid for too dearly. They also found that it prevented them from acquiring strength of their own. They could not stand without it. They had no bottom of their own. In 1904 they decided to make deposits their mainstay. They laid themselves out for collecting them, and they were gathering them in by the million. They were now in fact straining every nerve to make themselves independent. In France, State help, already amounting to more than 100,000,000 francs, dealt out without interest, altogether failed to produce the desired results of making members of banks careful to provide for sufficient capital of their own, or even for the accumulation of reserve funds. Those men had been brought to look upon State help as mere "manna" dropping down from Heaven. And in Italy authorities were almost in despair at the failure of their ingeniously worked out State-help schemes. The peasants declined to accept such help—

partly because what they wanted much more was security of tenure. In matters of personal credit, which related, not to measures of general good but to the benefit of distinct individuals, each of them carrying on his own business for his own private profit, let them beware of State help! What was required was proper organisation and individual effort.

The speaker concluded by expressing a hope that this discussion of Mr. Sanders' Paper might lead to some economically sound scheme of "Agricultural credit," both "mortgage" and "personal," being adopted. For what the land was thirsting for to yield its increase was money.

Mr. HOWARD FRANK (Visitor) said it was with some hesitation that he rose to speak, because he felt there were others present more able to do justice to the subject, but as Mr. Sanders had asked him to say a few words he would do so.

He noticed that the author had said "when a great territorial estate comes into the auction mart the position of the tenants becomes one of very great anxiety." That was only too true, for he had known several farmers unable to buy their farms who had emigrated to Canada, and he knew a few who had gone to Australia. That could not be in the interest of the State, for those men were really good farmers, carrying on their farms successfully, but they were unable to borrow the remaining one-third of the purchase money which they generally required to enable them to purchase.

One of the proposals of the National Credit Society was: "The granting of land to occupying tenants and *others.*"

He thought that some protection was required for occupying tenants as against outside buyers, and that when facilities were given for the purchase of farms, some preference should be afforded to tenants, otherwise a great injustice might arise. Even apart from speculators he had known of more than one instance where a purchaser had bought and gone to the tenant who was turned out, or going to be turned out, and said, "If you like to pay an increased rent you can have this farm." If this credit system were to be applied to assist such purchasers it would defeat the object they had in view, namely, to help the tenant. In the credit system on the lines adopted by Mr. Sanders, preference should be given to tenants who were going to occupy their farms, and further, no one who took advantage of the system should be allowed to complete his purchase and then sell his farm unless he had been there for a period of five years. That would prevent the tenant taking advantage of cheap money from the State in order to sell. Again, the whole of the money should only be advanced to tenants who were going to occupy their farms, otherwise great injustice might be done to other people.

It had been suggested in the discussion that it would not be safe to advance the whole of the money to the occupying tenant; that was not his experience. Farmers were about the best class of men to lend to. There was no difficulty in ascertaining the exact position of a tenant farmer and whether he had a good reputation as a payer. It was far safer, as a rule, to lend to him on mortgage than to average people. The value of his stock would be known, and there would be very little difficulty in finding out whether his stock was obtained by borrowed money or not.

Whilst he absolutely agreed that proprietary owner-

ship was the best thing in the interests of the State, he also knew that many farm tenants did not like it. With regard to Mr. Walter Long's estates he had had occasion during the last few weeks, as the Government contemplated their purchase, to ascertain which of the tenants wished to buy and which to rent. He had gone into the subject thoroughly, and there was not a single tenant who said he wished to purchase outright; they all preferred to rent, although a quarter of them asked for an option to purchase, and it should be remembered that the purchase price and the rent were to be based on the total purchase money paid distributed over the respective holdings.

From the foregoing it would be seen that the position of the tenant would have to be considered, as many farmers at the age of forty or fifty did not contemplate with satisfaction taking up a scheme of purchase extending over fifty years. They were getting on in life, and they did not like to undertake a responsibility that would descend to their children, and he found that in those circumstances farmers preferred to rent rather than buy. He hoped in any scheme that was definitely framed due consideration would be given to such men. The subject was one of vast importance just now, as a large number of estates were being broken up, and although many people had suggested schemes nothing had been done.

They were much indebted to The Surveyors' Institution and to Mr. Sanders in particular for bringing forward a practical scheme which he hoped would result in benefit to the agricultural community.

Mr. DANIEL WATNEY (Past-President) desired to say how much obliged he was personally, and he hoped they

were also, to Mr. Sanders for coming over from the distressful country to give them his views. The author had large experience of Ireland and of the way the Land Acts, down to the most recent one, were administered. He could tell them what had happened under the Irish purchase scheme, and he wanted to see something of the kind established in England.

Whether he agreed with everything in the Paper or not did not matter, but the author had put his proposals before them very clearly and concisely, and if a scheme were to be inaugurated his able marshalling of the facts would prove of real value.

One of the speakers had said that he did not approve of large estates being cut up; whether he meant compulsorily or not he did not quite gather, but surely within the last three or four years so many estates had been split up that notwithstanding what Mr. Howard Frank had just told them, he was sure that if the occupiers could have borrowed the money easily, and at a low rate of interest, instead of by the cumbrous process of a mortgage, which would not give them more than two-thirds the purchase money, many would have taken advantage of the opportunity. If land and agricultural banks were established by which that could be done, it would in his opinion be a great advantage to the country.

He could not second the vote of thanks as that had already been done, but he cordially supported it.

Mr. C. S. PAIN (Fellow) said as a Member of the Cheshire County Council he was much interested in the subject of the Paper, and he would like to take the opportunity of saying how much indebted he was to the Council for providing afternoon meetings which enabled

provincial Members to come and take part in the proceedings.

He would try to put his remarks in as concise a form as possible for time was advancing very rapidly.

In the first place he thought that the British financial milch cow should be as available to England and Scotland as to Ireland.

Credit banks were not so suitable for tenant occupiers of small holdings as for owners, both from the lender's and borrower's point of view, for the obvious reason that tenants had not sufficient security to offer. Take the case of an applicant for the tenancy of a small holding; the county council had to provide the necessary buildings, and thus one of the chief securities of an owner was absent when an occupying tenant desired to borrow.

It had been said that the landowners, the farmers, and the public would supply the money to co-operative banks at 4 per cent. He doubted this, as some landowners, and certainly most large farmers, did not look with great favour on small holders, especially where their land was taken compulsorily to establish them, and he did not think many of the public would be particularly attracted by an investment such as that suggested with a limited dividend. They would therefore have to fall back on the State.

Mr. Sanders' proposal that the members of the society should be jointly and severally liable would be unpopular, as he feared that the small holders and rural labourers would not as a rule have much trust in their neighbours.

He was surprised to find from the Paper the small average amount of the loans given by the Irish credit societies, but doubtless that was due to their advantages being made use of mainly by the very poor.

In regard to the Bills of Sale Act, he thought it would be very unwise indeed that exemption should be made and bills of sale not take effect as at present. What was to become of the ordinary creditor? There were all kinds of borrowing on stock or furniture, &c., and he feared that to do away with the existing system in the case of farm stock, whether live or dead, might give rise to difficulties which at the moment it was not easy to foresee.

In conclusion, he would like to remind them that the proportion of purchase money mentioned by Mr. Wolff as being advanced on mortgage by the *Landschaften*, would be of little use to small holders in this country. In few cases could they find the remaining third and have any capital left for stocking purposes.

The vote of thanks having been put to the Meeting and carried unanimously,

Mr. SANDERS, in reply, expressed his thanks to the proposer and seconder of the resolution, to his old friend Mr. Watney, and to the other speakers for the very kind way in which they had received his Paper. At that late hour he did not find it possible to deal with the whole of the points which had been raised, and having received the permission of the President to do so, he would submit his replies in writing so that they might be published in the *Transactions*. The presence at the Meeting of his friend Mr. Wolff was a great pleasure. Mr. Wolff was the greatest authority on co-operative credit societies in the country. He it was who introduced them into England nearly twenty years ago, and his book entitled "*Co-operative Banking*" was almost

the only standard work on that subject in the English language.

The Meeting then closed.

Mr. Sanders has sent the following reply to the points raised in the discussion on his Paper :—

Before replying to the particular points raised on discussion, I desire to clear up what may cause a misapprehension concerning the 3 per cent. Guaranteed Bonds. My proposal is to attach to the bonds the contingent guarantee of the Consolidated Fund, which I am advised would give to them a currency nearly equal to par. It is inconceivable that the Treasury could lose anything, because in addition to the security on the land the two intermediary guarantee funds would have to be exhausted first, viz. :—

(1) The County Guarantee Fund, which, like the "Guarantee Fund" in Ireland, would recoup the Consolidated Fund in respect of any temporary advances caused by loss in the collection of tenant purchasers' instalments. (See Section 29, Irish Land Act, 1903.) The Irish Guarantee Fund consists of the Equivalent Grants which are paid to the Irish Local Taxation Account in respect of the Agricultural Grant, Licences, additional Beer and Spirit Duties, and Ireland's share of Estate Duty. These have averaged for the past ten years somewhat more than £1,400,000 per annum. Thus any default made by tenant purchasers practically comes on local rates. Indeed the losses under this heading are very slight, although over 30 millions of Irish Guaranteed Land Stock has been issued. The corresponding fund

in England amounts to about £7,000,000 per annum (Beer and Spirit Duties, English Licences, share of Estate Duty, and refund of Agricultural Rates); similarly in Scotland, the equivalent grants amount to £1,000,000 per annum. These funds, or a portion of them, would form the County Guarantee Fund; and

(2) The Special Reserve Fund of the National Land Credit Society, made up partly by a cash contribution from the Treasury and partly by the share capital of the Society to be paid up before business can commence. One of the speakers seemed to think that the share capital of one million was to be used directly for land purchase loans. This would not be so. The object of having a share capital is practically for this Reserve Fund and to put the Society in funds for their general business outside that of issuing land bonds. I should like to see the Italian plan adopted, and as Local Credit Societies should come into existence and join the federation of the Central Bank the share capital would be eventually acquired by the Societies, thus establishing a perfect co-operative system.

The point raised by Mr. Sabin that the whole purchase money could not be advanced, as in Ireland, is important. There are cases, perhaps, where this may not be possible, but he has not noticed the provision of "guarantee deposits" which worked with success in Ireland under the Ashbourne Act. Some modification is suggested—the guarantee would be given by the vendor, either personally or by his consent to a retention of a guarantee deposit out of the purchase money, or the tenant might bring in a security on his personal assets on the farm, or the guarantee of a local credit society might be taken. Recollect that these guarantees will only be necessary for a short period of years, until

a proportion of the original advances, say one-fifth, has been redeemed by the sinking fund.

I am glad that Mr. Howard Frank agrees with me that the English tenant farmers are "about the best class of men to lend to." He speaks with great authority on the subject. A farmer's capital represents more than seven times the rent, and by freeing him from the incubus of the Bill of Sales Act this capital can be given as security where it is desired.

Mr. Eggar also agrees with this. The Memorandum on the subject printed in the Appendix is taken from a draft Bill supplied to me many years ago by his brother, Mr. Robert H. Eggar, a partner in the firm of Messrs. Norton, Rose & Company, the well-known Parliamentary lawyers. Mr. Pain, while strongly advocating co-operative credit societies, questions the desirability of interfering with this Act. I think his objections can be guarded against in the way suggested. No doubt the security given by Irish tenant purchasers for the whole purchase money is covered by the saleable value of their tenant-right, which is very different from the English tenant-right, including far more than the actual expenditure in cultivation and improvements, because it includes a proportion, probably one-third, of the fee simple value of the land which they have acquired without purchase from the owner under the rent-fixing clauses of the Land Act.

Mr. H. W. Wolff, speaks with great authority on co-operative credit, but I do not gather that he has any fundamental objection to the main principles of the scheme. His criticisms refer principally to the historical sketch of credit organisation. The old *Landschaften* and *Ritterschaften* are, I daresay, rather antiquated institutions. To a large extent they have

performed their work, but the new co-operative land banks founded upon the same principles, which are included in my reference, have accomplished, as he admits, a great work for the small owners.

The Schulze "Popular Banks" have their offices in the towns, but they deal largely with agricultural credit in the country, and the Italian "Popular Banks," which are founded on the Schulze models, are mainly, I think, agricultural. The Raiffeisen banks are essentially rural, that is to say, confined to a small rural district, a village or a hamlet, or its surroundings. I believe that the Schulze banks are the best model for the "Agricultural Banks" proposed and the Raiffeisen societies for the "Rural Credit Societies." I am glad we are in agreement on the question of savings bank deposits. I am very much indebted to a study of Mr. Wolff's book on co-operative banking on this subject. We are agreed also on the question of Irish land stock. It seems ridiculous that the Treasury should make such a fuss about raising money for Irish land purchase when every penny of the purchase money proper is amply secured on Irish resources, and when the Treasury hold more than eleven millions of the savings of the Irish peasants in the Post Office, and there are forty millions in the Irish Joint Stock Banks at low interest.

If Irish land stock could be made a popular investment in Ireland, the general security of the stock would improve. If the peasant class who are also borrowers held it, the price might eventually rise to par owing to the greater confidence which this would inspire. My scheme is intended to keep the organisation of rural credit distinct from the organisation of personal credit, as Mr. Wolff desires. Each credit society is a separate unit, and the societies which deal in personal loans would form an

organisation in themselves. The National Land Credit Society would issue the loans for the purchase of land, but that part of their organisation would be quite distinct from the organisation of the credit societies. The relation between the credit society and the central land bank would be very similar to the arrangement between the credit society and the joint stock bank at present. In Ireland credit societies raise their money from the Joint Stock Banks, but the latter make a condition that if any deposits are taken the loan will be called in. This arbitrary condition strikes at the foundation of the whole system.

In any purchase scheme the sitting tenant should have the preference, and I think in most cases security would be found in the land, supplemented by the methods I have mentioned, for the whole of the purchase money. I do not think the whole of the purchase money could be advanced to a new and untried occupier of land. I am not sure whether such a man ought not first to go through a period of probation as a tenant. That is a detail, though an important one. Co-operative land societies appear to be working very well under the county councils, they might become intermediaries in this connection.

I quite understand the preference which many English tenants have to rent rather than to buy, especially those who live under such generous landlords as Mr. Walter Long. The pressure of taxation, and the withdrawal of many privileges which now accompany the large estates, will force landowners in the future to look to the land merely as a means of obtaining income, and of paying off the debts incurred on account of taxation. The generous treatment may not continue, and then the tenants will desire

to purchase and not to rent. The same has been the case in Ireland where the Irish farmer was very slow at first to adopt land purchase.

I wish that the question could be dealt with apart altogether from party politics, as Mr. Sabin says, and perhaps one of the best ways of accomplishing this end is to discuss it before such a body as The Surveyors' Institution, which knows no politics, but only desires that the best results should be obtained from the land in the interest of all who live by the land, no matter to what party they may belong. To use the words of Arthur Young, we wish to see "two blades of grass growing where only one grows now."

APPENDIX A.

PROPOSED AMENDMENTS IN THE LAND TRANSFER ACTS AND PUBLIC TRUSTEE ACT TO FACILITATE SALES FROM OWNER TO OCCUPIER OF AGRICULTURAL LAND.

1. It is proposed that when an owner, desiring to sell to occupying tenants, applies to register agricultural land with "possessory title," the Land Registry may issue a *certificate that he is an owner entitled to sell under the Settled Land Acts* without investigating full title on production of such *prima facie* evidence as the Registrar may require. The certificate shall give reference in detail to a map of the portion of the estate which he desires to sell under these provisions.

2. An owner of an estate, having obtained such certificate, shall be entitled to contract for the sale of the land to any occupying tenant, society, or individual entitled to purchase under the proposed Act. The contract to be in the prescribed form, and where the whole or part of the purchase money is to be provided by means of a terminable annuity, in favour of the National Land Credit Society, that Society to be a party to the contract, and the contract to be conditional upon such advance being sanctioned by the Society or the other authorities concerned.

3. On the production of the contract at the Land Registry Office with a certificate of the amount agreed to be advanced by the Society, the Land Registry shall file the contract, and on proof of payment of the purchase money, as hereinafter provided, the fee simple of the land shall vest automatically in the purchaser without any further proof of title subject to the terminable annuity in respect of the purchase money borrowed (to be a first charge), or to any subsequent charges placed upon the land by the purchaser.

PAYMENT OF PURCHASE MONEY TO PUBLIC TRUSTEE.

Under this procedure the Public Trustee alone shall be capable of issuing a receipt for purchase money. The purchase money, in every case, to be lodged to the "Trusts Account" at the Bank of England to the credit of the matter.

Where money is so paid into the Bank of England, the Land Registry shall make "an order attaching claims to " the purchase money " which shall be as effectual for that purpose as the order vesting the land in the purchaser, and by such order the claims of persons, whether incumbrancers or otherwise, shall attach to the purchase money of such land in like manner as immediately before the sale they attached to the land, and shall cease to be valid as against the land and shall be discharged out of the purchase money.

On the application of the vendor, the Public Trustee shall invest the purchase money in authorised trustee securities, the income of the investments to be paid over to the person who would be entitled to the receipt of rents if no sale had taken place, and any person having an interest in the estate, whether as an incumbrancer or otherwise, shall have the same rights against the income of the fund as would have existed against the rent.

When an order is made attaching claims, a date referred to as the Closing Day may be named by the Land Registry.

Any person having a claim against the purchase money, as an incumbrancer or otherwise, shall be required to prove his claim before that date in the Land Registry Office.

APPENDIX B.

PROPOSED AMENDMENT IN THE LAW
RELATING TO BILLS OF SALE.

The Bills of Sale Acts, 1878 to 1882, render it impossible for a farmer to give a valid charge for a loan upon the live and dead farming stock and crops of the farm, unless he registers a bill of sale. This is a process destructive to his credit and generally only resorted to by money-lenders. The law is sometimes avoided by a clumsy device known as the "hire-purchase system." It is proposed that in the case of loans from credit societies, specially licensed by the Board of Agriculture, the Bill of Sales Act shall not apply, provided the borrower is a member of the society, and that a characteristic mark or notice of this fact is placed in legible characters on all documents, bills of exchange, cheques, and orders for goods, as well as upon all wagons, carts and vehicles belonging to him.

The society to keep at their registered office a register of names and addresses of all members to whom advances have been made, and such register to state whether such advances are by way of a specific charge, or by way of floating security; but, save as aforesaid, no further details of such advances shall be entered on the register. When an advance is paid off the member's name is to be struck off the register. The register to be open to the inspection of the public, without fee or charge, at stated hours.

The society to give each member a certificate, under the seal of the society, that such member has not had any advance by way of a specific charge from the society, and before the society makes any advance to a member it shall require such member to hand over such certificate for cancellation.

When the advance is paid off and satisfied, the society to give such member a fresh certificate of no specific charge.

The advance made by the society to the member may be charged upon all live or dead farming stock or any crops or agricultural produce, and may be by way of specific charge or of floating security, and where it is made by way of floating security, the member to retain his certificate of no specific charge. The specific charge, however, would come into operation in case of bankruptcy or of an execution put in by an unsecured creditor.

The charge thus created would not have priority over rent, but would be good and valid in priority to any other creditor.

The specific charge would not prevent the tenant from selling or disposing of his live or dead farming stock or agricultural produce in the ordinary course of business up to a certain limit in any one transaction, say, £20, but otherwise any sale would not be good or give the purchaser any title against the society, unless such purchaser could show that at the time he purchased, the member was in possession of a certificate of no specific charge, or unless in the case of a specific charge being in existence, the purchaser lodges the purchase money with the society or its agents.

Where an advance is made to a member by way of floating security, the member to be entitled to sell or dispose of his farming stock, &c., in the ordinary course of business, except by registered bill of sale, but in the case of the bankruptcy of such member or of an execution being put in against him on behalf of an unsecured creditor, such advance, by way of floating security, shall, as regards the live or dead farming stock, or crops, or agricultural produce comprised therein, take priority to the unsecured creditors of the bankrupt or to such execution creditor.

APPENDIX C.

TABLE SHOWING NUMBER OF AGRICULTURAL HOLDINGS
IN ENGLAND AND WALES OF 1 TO 50 ACRES.*(Extracted from Board of Agriculture Report on Small Holdings, 1909.)*

County.	Occupying Ownerships.	Tenancies under Private Owners.	Tenancies established by County Councils up to end of 1909.
Bedford . . .	306	2,359	123
Berkshire . . .	653	1,796	44
Buckingham . . .	624	2,626	34
Cambridge . . .	655	4,218	281
Chester . . .	749	7,855	65
Cornwall . . .	1,044	8,608	23
Cumberland . . .	658	3,539	3
Derby . . .	879	7,473	5
Devon . . .	1,464	7,932	37
Dorset . . .	408	2,797	37
Durham . . .	482	3,808	28
Essex . . .	1,264	4,132	71
Gloucester . . .	1,289	5,379	104
Hereford . . .	598	3,455	20
Hertford . . .	475	1,764	36
Huntingdon . . .	176	1,373	201
Isle of Ely . . .	Figures included of Cambridge	Figures included in County of Cambridge	243
Isle of Wight . . .	Figures included in County of Southampton	Figures included in County of Southampton	29
Kent . . .	1,425	5,869	72
Lancaster . . .	1,582	12,787	16
Leicester . . .	626	4,164	9
Lincoln . . .	2,079	12,871	174
London . . .	90	122	—
Middlesex . . .	363	1,167	10
Monmouth . . .	444	2,657	13
Norfolk . . .	1,277	7,607	332
Northampton . . .	504	2,859	35
Northumberland . . .	284	2,782	26
Nottingham . . .	631	3,991	19
Oxford . . .	598	1,953	60
Rutland . . .	53	447	3
Carried forward . . .	21,680	128,390	2,153

County.	Occupying Ownerships.	Tenancies under Private Owners.	Tenancies established by County Councils up to end of 1909.
Brought forward .	21,680	128,390	2,153
Salop	847	7,026	11
Soke of Peterborough	Figures included in County of Northampton		11
Somerset . . .	1,593	7,660	186
Southampton . .	1,669	5,285	51
Stafford	1,023	7,562	4
Suffolk	830	3,685	69
Surrey	1,149	2,234	14
Sussex	1,275	4,572	7
Warwick	626	3,924	27
Westmorland . .	307	1,491	6
Wiltshire	892	3,446	22
Worcester	863	5,502	94
York, East Riding .	533	3,893	21
York, North Riding	704	7,213	6
York, West Riding .	2,573	17,409	3
Anglesey	404	3,071	18
Brecon	170	1,599	1
Cardigan	894	3,623	10
Carmarthen . . .	669	4,911	11
Carnarvon	648	4,784	—
Denbigh	300	3,634	14
Flint	226	2,498	—
Glamorgan	250	3,600	1
Merioneth	141	1,818	—
Montgomery . . .	335	3,325	1
Pembroke	441	3,644	35
Radnor	187	983	19
TOTAL	41,229	246,782	2,795

NOTE FROM REPORT (Part I., page 13).—No more recent figures are available of the acreage held in different sized holdings, but the number of small holdings in England and Wales in 1909 had fallen to 288,011. It must not be assumed, however, that there are 288,000 small holders, in the ordinary sense of the term, in England and Wales. The returns include small residential properties which have a few acres of land attached, but which are not farmed for profit, and the holders of which cannot be properly described as small holders. Inquiries were made by the Board in 1907 with the object of ascertaining how many of the holdings were, in the opinion of the occupiers, farmed for business, and if the same percentages as were then ascertained for holdings between one and five acres and between five and fifty acres in England and Wales respectively are applied to the figures for 1909, it appears that the total number of small holdings in England

and Wales which are farmed for business amounts to 264,064. If some deduction is made for those cases where more than one separate holding is held by the same person, it seems reasonable to suppose that the actual number of small holders in England and Wales is approximately 250,000. As the percentage of occupying owners of the holdings between one and fifty acres in England and Wales is 14·5 of the above, it may be estimated that of the 250,000 small holders 36,250 is the approximate number who are peasant proprietors, and the remainder are tenants of their holdings. It is interesting to notice that while the number of small holdings in England and Wales has shown a steady decline in the last twenty-five years, the figures for 1909 show that the tide has begun to turn, and that there is a net increase of 835 small holdings as compared with 1908. When it is remembered that there is inevitably some loss each year owing to the encroachments of the town on the country, it seems clear that apart from any small holdings created by the Act there is an increasing tendency on the part of private landowners to cut up large farms into small holdings.

The figures summarised above show that the number of small holdings created by statute can never be more than a small proportion of the total number, though at the same time there is every reason to believe that for many years to come the demand for small holdings will be amply sufficient to occupy fully the attention of all those who are responsible for the administration of the Act.

The number of small holdings in each county is shown in the particulars relating to that county in this report.

APPENDIX D.

COMPARATIVE PERCENTAGES OF THOSE ENGAGED IN
AGRICULTURE AND OTHER OCCUPATIONS IN THE
FOLLOWING COUNTRIES :—

	Agriculture.	Manufactures.	Commerce.	Other Professions.
England . .	9	52	15	24
Scotland . .	12	53	13	22
Ireland . .	36	18	4	42
Germany . .	37	42	13	8
Austria . .	58	22	8	12
Denmark . .	39	32	10	19
Italy . .	38	16	5	41

(From International Institute of Agriculture, Rome.)

APPENDIX E.

COMPARATIVE TABLE OF THE NUMBER AND FINANCIAL POSITION OF THE CENTRAL CO-OPERATIVE SAVINGS BANKS OF GERMANY FOR THE YEARS 1895-1909.

Year.	Number of Central Banks.	Total number of their Members.	Number of Shares.	Sum total guaranteed by limited liability of Members. Marks.	Total business of the year (outgoings and incomings). Marks.	Capital belonging to Banks. Marks.	Profits Marks.
1895	10	1,216	6,803	7,368,000	93,901,495	728,523	17,728
1896	12	2,214	15,510	21,361,000	192,184,711	1,014,271	51,692
1897	17	3,194	28,919	42,420,000	287,286,278	1,367,725	110,469
1898	20	4,927	37,832	55,176,500	599,845,765	1,792,942	77,810
1899	20	5,218	44,819	65,768,000	667,220,699	2,055,957	60,269
1900	21	5,743	54,378	80,148,500	859,026,461	2,865,999	211,209
1901	21	6,060	64,760	99,575,500	1,086,429,377	4,265,999	421,269
1902	23	7,544	75,522	124,656,500	1,623,490,595	7,271,000	583,106
1903	22	7,997	79,761	141,168,000	1,782,225,299	9,443,862	623,219
1904	23	8,514	89,931	157,200,000	2,190,645,529	10,615,928	821,090
1905	35	9,788	102,456	203,945,500	2,857,198,285	14,007,532	1,113,902
1906	35	9,633	130,445	204,578,000	3,148,842,089	17,866,160	1,118,730
1907	35	10,040	135,307	231,259,500	3,754,541,587	19,676,059	1,108,515
1908	35	10,549	149,682	251,489,500	4,343,489,123	22,873,162	1,639,035
1909	36	10,987	155,337	266,830,500	4,913,786,468	25,815,032	1,775,573

SOME NOTES ON HIGHWAY LAW AS AFFECTING PROPERTY OWNERS.

By E. H. BLAKE (FELLOW).

*Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION held on Monday, 9th January, 1911.*

LESLIE ROBERT VIGERS (President) in the Chair.

THE DEDICATION AND VESTING OF HIGHWAYS.

Most highways have arisen by reason of voluntary dedication by the owners of land of a right of passage over the soil. Some were made under Inclosure or Turnpike Acts, some by local authorities as incidents of improvement schemes under the Public Health Acts or Housing Acts, others under special Acts for local improvements, while in the future we shall have, in addition, those formed under the Housing, Town Planning, &c., Act, 1909, and the Development and Roads Improvement Funds Act, 1909.

Where a private owner throws open a road to the public he merely dedicates a right of passage, and the soil remains vested in him, subject to rights, given to local authorities by statute, of doing certain works therein and thereon in the public interest.

He can, for example, take proceedings against anyone using the highway for an unlawful purpose. Thus, in

Reg. v. Pratt,¹ land on both sides of the highway belonged to the same person, and an offender, who shot a pheasant as it flew across the road, was held to be trespassing in pursuit of game. In *Harrison v. Duke of Rutland*,² Harrison stood on a highway passing through the Duke's property, and tried during a shoot to prevent the birds reaching the butts. After being held down by the keepers, he brought an action for assault, but lost on the ground that he was not making lawful use of the highway. Another case of interest is *Hickman v. Maisey*,³ where a racing tipster frequented a highway for the purpose of watching trials of race-horses. He was held by the Court of Appeal to be guilty of trespass, in exceeding the reasonable use of the highway, as such, to which the public are entitled.

The dedication may be complete or partial; thus, if an owner lay out a road alongside a ravine the public must take it as it stands, and cannot call on him to fence it for their safety. If, however, he forms the road or path, he cannot after dedicating it to the public form, say, a ravine alongside without fencing it for the public safety.

No one can dedicate a road to the public except the owner in fee, and where a leaseholder for 99 years allowed a road to be used for the whole term as a public thoroughfare, the Court held that the freeholder could, at the expiration of the lease, close the road by erecting a fence across it. In the same case (*Corsellis and others v. London County Council*),⁴ it was held that land could not be dedicated to the public as a highway for a term of years.

¹ 4 E. & B., 860. 1870.

² *Professional Notes*, vol. vi. p. 65. 1893.

³ *Professional Notes*, vol. x. p. 185. 1900.

⁴ *Professional Notes*, vol. xiv. pp. 300 and 550. 1907.

Should a highway be abolished the soil of it reverts absolutely in the private owner (*Rolls v. Vestry of Southwark*);⁵ therefore, in the ordinary way, the soil of the highway is fully vested in the owners as sole owners, with the restriction that the local authority are entitled to limited ownership of the crust during the existence of the highway.

Such statutory rights are limited to such depth as is necessary for its maintenance, drainage, sewerage, &c., and to such height as is necessary to prevent obstructions to traffic. The highway authority can erect poles and wires for electric lighting, authorise gas mains for street lighting, and so on, but cannot license private traders to lay pipes under the road. Thus an injunction was granted restraining the council at Droitwich from allowing a salt company to lay pipes for the supply of brine for trade purposes. (*Salt Union v. Harvey*.)⁶

The highway is, in most cases, not restricted to the merely metalled part, but usually includes the unenclosed wastes, the space at the sides being necessary to afford the benefit of the air and sun to the surface of the road.

Very conflicting decisions have been given on this point. Thus Lord Russell of Killowen, in the Court of Appeal case of *Neeld v. Hendon Urban District Council*,⁷ declined to assent to a general proposition that all the space between the hedges is highway, pointing out that there were very many circumstances to be considered, such as the nature of district, width of margins, regularity of hedges, and levels of land adjoining road. Again, in a Kentish case (*Countess of Belmore v. Kent*

⁵ 14 C. D., 785. 1880.

⁶ 13 *Times Law Reports*, 297. 1897.

⁷ *Professional Notes*, vol. x. p. 71. 1899.

County Council),⁸ Lord Justice Cozens-Hardy said that he was satisfied that a roadside strip, with cartways across it, had only been used occasionally and by a few persons, and only to such an extent as was inevitable by reason of the absence of any fence or other obstacle, and that such user is too indefinite to establish a dedication as part of the highway. On the other hand, it was laid down in *Harvey v. Rural District Council of Truro*,⁹ that in the case of roadside wastes the public rights extended from hedge to hedge in the absence of evidence to the contrary, and that no long period of encroachment legalises the loss of public rights.

In the absence of proof to the contrary, the presumption is that the adjoining owner's property extends to the centre of the road, this presumption being adopted in the construction of conveyances in which land is described as bounded by a highway.

In London the highways repairable by the public are vested in the borough councils, as successors to the vestries under the London Government Act, 1899, the Acts providing that all vaults, arches, &c., under streets are to be repaired by owners or occupiers. Where the stones of the pavement formed the actual roof of a cellar, the local authority was held liable to reinstate when worn down by traffic. (*Hamilton v. Vestry of St. George's, Hanover Square*.)¹⁰

In provincial towns the Public Health Acts vest streets repairable by the public in the urban authority, who are given very complete powers of repair, reconstruction, raising, lowering, or other alterations.

The Local Government Act, 1888, vests main roads in

⁸ *Professional Notes*, vol. x. p. 524. 1901.

⁹ *Professional Notes*, vol. xii. p. 160. 1903.

¹⁰ *Law Reports*, 9 Q. B., 42. 1873.

the county councils, except such as the town councils desire to retain. Only the main roads are so vested, and in rural districts all other highways remain vested in the private owners of the soil.

The Public Health Acts provide that in urban districts the vesting includes roadside wastes, and the local authorities can let the right of pasturage on them, but the Local Government Act, 1888, provides that in rural districts the main roads are vested only to the extent of the metalled part. (*Curtis v. Kesteven County Council*.)¹¹

THE CONTROL OF HIGHWAYS.

The Highways Acts are badly in need of consolidation. It is unnecessary to go into the history of the old highway surveyors, districts, and boards. In England and Wales roads outside urban areas are divided into two classes, main and district. Main roads were originally a class of roads created by the Highways and Locomotives Act, 1878, gradually to supersede the turnpike roads, the last Turnpike Trust expiring in 1896. The main roads are under the control of county councils, by the Local Government Act, 1888, and the district roads came under the rural district councils by the Act of 1894.

Public footpaths repairable by the inhabitants at large are under the control of the district councils. The parish council can repair them but the district council does not thereby lose its liability for the cost. This note does not apply to footpaths at the side of a road. The council cannot compel a landowner to repair

¹¹ *Professional Notes*, vol. iv. p. 367. 1890.

a footpath across his land nor prevent its being ploughed up from time to time if it has been customary to do so.

The Public Health Act, 1875, puts the control of highways in urban districts in the hands of the urban authority.

In London the control is in the hands of the borough councils so far as existing streets are concerned, and in the hands of the London County Council as regards the laying out of new streets.

THE LAYING OUT OF NEW STREETS.

The term street is exhaustively defined in the Public Health Acts, and in the London Building Act, 1894, but there has been much litigation as to the exact meaning of laying out a new street both in London and the provinces. The case in which a street is being formed where none previously existed is clear, but an old highway may also in certain circumstances become a "new street."

The House of Lords held, in the case of *Robinson v. Barton Eccles Local Board*,¹² that an old highway repairable by the inhabitants at large becomes a new street on the erection of buildings along it, Lord Selborne stating that by "new street" he understood "a place which before had not that character, but which, by the construction of buildings along each side, or possibly on one side only, had acquired it." Lord Jessel, M.R., in the same case said that "no universal test can be applied to determine the conditions which convert an old road into a new street. The question cannot be answered till you know the locality." This

¹² *Law Reports*, 8 App. Cas., 798. 1883.

case has been largely followed, and time after time the question has been held to be one of fact for the magistrates to determine. In *Stourbridge Urban District Council v. Rufford*,¹³ a country lane had been long a public thoroughfare. The defendant built a factory on one side and proposed erecting one on the opposite side. He was held to be laying out a new street and required to make it of the width prescribed by the by-laws.

On the other hand, in *Devonport Corporation v. Tozer*,¹⁴ the defendant, who owned a triangular piece of land surrounded by highways, erected buildings, leaving the fences intact except for providing gates for access, and the Court of Appeal held that he was not laying out a new street within the meaning of certain by-laws of the local authority.

In a case at Bristol, where a long narrow passage communicated with a main street, the passage having cottages on one side and their gardens on the other, a man bought the gardens and built houses fronting the main street. The flank wall of the end house abutted on the passage. The Court of Appeal held that he was not laying out a new street. (*St. George's Local Board v. Ballard*.)¹⁵

There have been many interesting cases on this point under the London Building Acts, but in most cases the Court appears to have held that the question was one of fact for the magistrates to determine.

An important case is that of *Smith v. Chorley Urban District Council*,¹⁶ in which the Court of Appeal held

¹³ *Times Law Reports*, C. D., vol. xv. 152. 1899.

¹⁴ *Professional Notes*, vol. xi. p. 312, and vol. xii. p. 77. 1903.

¹⁵ *Professional Notes*, vol. vii. p. 289. 1895.

¹⁶ *Professional Notes*, vol. viii. p. 355. 1897.

that where a local authority have, in good faith, refused to pass building plans on the ground that the erection of the houses would amount to laying out a new street of insufficient width according to the by-laws, no action will lie for a mandamus to compel them to pass the plans.

Some local authorities have their own special Acts, but in general their powers in the provinces are obtained from the Public Health Act, 1875, which enables urban authorities to make by-laws as to width, level, and construction of new streets, including the giving of notices, deposit of plans, inspection of work, and power of the authority to remove, alter, or pull down work done in contravention of such by-laws. A rural district council can get the same powers by an Order of the Local Government Board. The Public Health Act, 1907, an adoptive Act, provides that the deposit of plans shall be of no effect unless the work is begun within three years. Further, that the *authority* may say which part of any thoroughfare is a new street. It gives them power to vary the direction and position of roads in order to make them of maximum utility to the neighbourhood unless it would mean the purchase of additional lands by the applicant, and in any case he is, by the Act, entitled to compensation if he can show injury.

The Housing, Town Planning, &c., Act, 1909, gives further drastic powers to the local authorities on this matter of laying out streets, but I do not propose to deal with this Act, as an admirable Paper on it was read at this Institution a short time ago. (Vol. xlii., Part 4, by Mr. John Willmot.)

In the metropolis the provisions of the London Building Act, 1894, give a definite code of procedure for persons desiring to lay out new streets or widen old

ones. Written application must be made to the London County Council, with plans, sections, and other particulars. The application must be communicated by the London County Council to the borough council, and the former may refuse sanction on certain specified grounds. If refusal or sanction is not given within two months sanction is legally to be presumed.

Persons laying out new streets must take all precautions for the public safety as may be directed by the local authority, who may, in default, do what is necessary and recover the cost.

THE MAKING-UP OF PRIVATE STREETS.

In the metropolis powers as to paving are vested in the borough councils, as the successors of the vestries. The Metropolis Management Act, 1855 (Section 105), provides that if the owners of the majority of houses in a new street not paved to the satisfaction of the council be desirous of having such street paved, or if the council deem it necessary or expedient that it should be paved, the council shall pave the same, either partially or entirely, and keep it in repair, the expenses of paving to be paid by the owners of the houses. Owing to its length the full text of the section is given in an Appendix at the end of this Paper. (*See Appendix I.*)

It will be seen that this section exempts owners of land which is not built upon. The Metropolis Management Act of 1862, however, makes owners of abutting or bounding *land* liable as well as owners of *houses*, but provides that the council may charge owners of land on a lower scale than the owners of houses, apportioning the expenses, and recovering them before commencement, during progress, or after completion of the work. Such

expenses may be allowed to be paid in instalments extending over not more than twenty years, and are recoverable from the present or any future owner.

The term street, under the 1855 Act (Section 105), means a street composed wholly or partially of houses on one side or the other, and this meaning was not extended by the Act of 1862 to include a road with no buildings along it. (*Vestry of Battersea v. Palmer.*)¹⁷

But by the decision in *Simmonds and Others v. Vestry of Fulham*,¹⁸ a road may be a new street under Section 105, although all the land along one side of it is building land on which no building has been erected.

Numerous cases have been decided to the effect that an added strip may be, in itself, a new street, both in London and the provinces, and the frontagers on its side only are liable for the cost of making it up, since there are no owners abutting on the opposite side of the strip. (*Property Exchange, Limited, v. Wandsworth Board of Works.*)¹⁹

After the owners have paved a metropolitan street the local authority is bound to keep it in repair, whether it has become a highway or not. (*Camberwell Vestry v. Hunt.*)²⁰

In case an old footway, laid out at 1855, shall have been repaired by the public, but not properly flagged or paved, and the local authority deems it necessary or expedient that it should be so paved, the authority can do the work and recover the cost from the abutting owners. By the 1862 Act the expense fell on the vestry, but this was altered by an Amendment Act of 1890.

¹⁷ *Law Times*, Q. B. D., vol. lxxv. p. 362. 1896.

¹⁸ *Professional Notes*, vol. x. p. 267. 1900.

¹⁹ *Professional Notes*, vol. x. p. 530, and vol. xi. p. 310. 1902.

²⁰ 56 *L. J. M. C.*, 65. 1887.

The duty of lighting the streets is imposed on the local authority. It will be noticed that there is no exemption from the liability for expenses of making-up streets in London.

The owner, from whom the expenses are to be recovered, is defined, as regards the metropolis, by the 1855 Act, and as regards the provinces by the Public Health Act, 1875, as the person for the time being in receipt of the rack-rent, whether on his own account, or as agent or trustee for any other person, or who would so receive the same if such lands or premises were let at a rack-rent.

In London the paving expenses are recoverable by action from the present or future owners, or from any person who then or thereafter occupies the premises. No greater sum can be demanded from the occupier than the amount due from him to the landlord, and he can deduct from his next payment of rent. If paying a rack-rent he may deduct the whole, and if paying less than rack-rent can deduct a proportionate amount. This provision, however, is not to affect any covenant between landlord and tenant.

The expenses are not a charge upon the premises, and an unsatisfied judgment is no bar to a subsequent action against a successor. The Statute of Limitations would hardly apply, since the prescribed time would not begin to run until the money was demanded from the owner for the time being.

In the provinces the procedure for making up private streets is in some cases regulated by special local Acts, but, generally speaking, it is done under either the Public Health Act, 1875, or the Private Street Works Act, 1892.

Under the former, Section 150, where a private street

is not sewered, needs making up, or is not properly lighted, the local authority may serve notice on the owners or occupiers to do the work within a stated time. The engineer to the authority prepares plans and estimates of the work required, and these particulars must be open to inspection at all reasonable hours. Should the notice not be complied with, the authority may do the work and recover the expenses in a summary manner, the surveyor apportioning them according to the frontage of each property. Any disputes as to making-up streets under the Public Health Act are to be settled by arbitration. (The full text of Section 150 is given in Appendix II. of this Paper.)

The Act applies to all urban districts, unless the Private Street Works Act has been adopted, and can be applied to a rural district by an Order of the Local Government Board. It exempts from liability the incumbents or ministers of places of worship which are exempt by law from poor rate, and the local authority may, if it thinks fit, do any works on behalf of such persons, the cost being defrayed out of the rates and not charged on the other owners. On the other hand, it will be noticed that trustees of such buildings are not mentioned, and they have been held liable. A similar section in the Private Street Works Act exempts trustees also, and provides that the authority *shall* bear the cost.

A private street is a public highway, private only in the sense of the maintenance and repair are in private hands. The street must be treated as an isolated street, and works cannot be required to be done merely to make the street in conformity with another. The section applies to all present and future streets not repairable by the inhabitants at large, whether dedicated to the public or not. This was put very strongly by Lord Jessel, M.R.,

in the case of *Taylor v. Oldham Corporation*,²¹ when the learned judge pointed out that the exemption of courts and alleys, although there were no street rights over them, would be about the last thing likely in a Public Health Act.

The notices under Section 150 call for a few comments. A notice must, to be valid, contain specific reference to deposited plans and sections of the structural works intended to be executed. (*Stourbridge Urban District Council v. Butler*.)²² The notice is a collective one. In *Lancaster v. Barnes Urban District Council*²³ Mr. Justice Wills said: "It is a notice to all the owners collectively to make up the street generally. No one ever saw a notice under Section 150 calling upon each owner to make up that part only which was opposite his own house."

Notice must be given to either owner or occupier as a condition precedent to the right to sue. In a case at Wallsend (*Wallsend Local Board v. Murphy*)²⁴ notice was only served on a reputed owner, who had sold the property a month before. The new owner was held not liable as he had had no notice, and none had been served on the occupier. In the latter case he would have been liable. The person liable is the owner at time of completion of the works, and he is still liable if he has sold the property when demand is made for payment. (*East Ham Urban District Council v. Aylett*.)²⁵

Under this Act the expenses of making-up are a charge on the property. In the case of public pleasure grounds or commons the local authority ranks as owner,

²¹ *Law Reports*, 4 Ch. D. 395. 1876.

²² *Professional Notes*, vol. xv. p. 189. 1909.

²³ *Professional Notes*, vol. ix. p. 131. 1898.

²⁴ *6 Times Law Reports*, 29. 1889.

²⁵ *21 Times Law Reports*, 406. 1905.

and is liable for its frontage, under a House of Lords decision in *Great Eastern Railway v. Hackney Board of Works*,²⁶ but the formal apportionment need not include all premises fronting the street. Under the Private Street Works Act it must, since the owners have no option of doing the work themselves, and they have a right to see the proportion which is to be borne by the authority or the amount of exemptions if any. (*Herne Bay Urban District Council v. Payne*.)²⁷

The test of liability under Section 150 is the benefit of access. There may be no access at the time, but if there is the possibility of access then there is the liability. There have been numerous cases on this point, and a few notes may be of interest. Thus, railway and canal companies are liable as abutting owners; the owner at the end of a cul-de-sac, even though cut off by a high wall; the owner who has a new street laid out against his boundary, even to the immediate detriment of his property; an owner whose back garden wall abuts on a footpath leading into a cul-de-sac, the level of the garden being many feet above or below the footpath. All these have been held liable under the principle of benefit of access.

The authority cannot charge a proportion of expenses on property which, though fronting or abutting on the street, is outside such authority's boundary. (*Hornsey Borough Council v. Birkbeck Land Society*.)²⁸ If the boundary of the district lies in the road the difficulty is often got over by a readjustment of boundaries, or each of the two authorities can do its own part of the street and recover from the owners in its area.

²⁶ 8 App. Cas., 687. 1883.

²⁷ *Professional Notes*, vol. xiv. p. 305. 1907.

²⁸ *Professional Notes*, vol. xiii. p. 595. 1906.

Before taking a road over on behalf of the inhabitants at large a local authority must require *all* the items given in Section 150 to be done, their discretion being limited only to the sufficiency of the work. They have no power to alter the relative proportions of footpath and carriage-way when making the road up (*Robertson v. Bristol Corporation*),²⁹ except in cases where these relative proportions have not been intentionally determined by the owner of the soil. (*Stretford Urban District Council v. Manchester South Junction and Altrincham Railway*.)³⁰ There would be nothing to prevent them doing so after the road has been taken over.

Wood paving and asphalt were held not to come within the scope of Section 150, but this was rectified by the Public Health Act Amendment Act, 1890, which provides (where adopted) that a street shall not be paved to the satisfaction of a local authority unless paved with such kind and quality of materials as the authority may think fit for such street. No provision is made in the section for objections to the proposed work, and the justices have no jurisdiction to hear them. The only method of objecting is through Section 257 or Section 268 of the 1875 Act, which must be done within three months of the amount becoming due. The former section refers to the recovery of expenses by an authority, and the latter to appeals to the Local Government Board by persons aggrieved by any procedure of an authority.

There are many essential points of difference in procedure under the Private Streets Works Act, 1892. The most important sections of this Act are given in full in Appendix III. at the end of this Paper.

²⁹ *Professional Notes*, vol. x. p. 682. 1900.

³⁰ 68 *J. P.*, 59. 1903.

The owners are given no option of doing the work themselves. All objections are dealt with before the work is executed, and should the owner fail to make written objection within one month he loses his right to object. Only certain objections specified in the Act can be made, and they are dealt with by a court of summary jurisdiction. The expenses need not necessarily be apportioned by frontage; that is to say, the authority can, by resolution, adopt a benefit-derived principle. The authority can include in the proposed works anything desirable in the way of bringing the street into conformity with other streets, and may bear all or any part of the cost of private street works. They must bear the expenses incidental to places of worship as to this matter. Railway and canal companies are exempted from contributing unless and until they have actual access to the street, the expenses in such case being borne by the other owners and repayable to them if such companies obtain access in the future. This provision only applies if the abutting land is used solely for the purposes of the undertaking. It would not, for example, apply to a station garden. A part only of a street may be made up or certain works only done. Streets may be made up together. The Act makes provision for sewerage on the separate system if desired. Premises may be included in the apportionment, which do not adjoin, abut, or front the street, but access to which is obtainable through a court, passage, or otherwise.

As a general rule owners neglect to inspect the plans, specifications, and provisional apportionment, or to have them inspected on their behalf. It is very desirable that this should be done, in view of the powers of objection. An appeal lies from the decision of the Court of Summary Jurisdiction to the Court of Quarter Sessions. The

Court has large discretionary powers, and may quash or amend the resolution under which the authority proposes to do the work. The magistrates cannot, however, quash a resolution on the ground that the widening of the street should be included, such an item not being admissible on the plea that the proposed works are insufficient or unreasonable. (*Mansfield Corporation v. Butterworth.*)³¹

The Act is an adoptive one and has been largely adopted by urban authorities. It can by Order of the Local Government Board be adopted by a rural district council. The "benefit-derived" principle has not been largely adopted, probably because it generally leads to trouble. There are many reasons why from an owner's point of view it should be adopted. With flank frontages in the case of a corner site an owner can, not unreasonably, expect an abatement. Most authorities charge by frontage only and make none. Some allow 25 per cent. reduction on flank frontage. In one case I have met with, up to 100 feet, flank frontages are charged at half-rate, and the remaining distance on the full rate.

One often finds cases of large works on back land, involving a considerable use of the street, with no more frontage than a gateway. Such a case could not unreasonably be charged on a higher scale than by mere frontage.

The expenses are charged on the owner for the time being, and are a charge on the premises. In order to recover the notices of both provisional and final apportionment must be served on the owner for the time being. (*Wirral Rural District Council v. Carter.*)³²

³¹ 2 Q. B., 274. 1898.

³² *Professional Notes*, vol. xi. p. 537. 1903.

The local authority must keep a register of such charges on premises in its district, and all persons have a right of access to it at a small charge. A copy of any part of such register must also be supplied at a reasonable charge. Such a register need not be kept under Section 150 of the Public Health Act, but it will be seen that a register of this description is of some value to intending purchasers.

Interest on the amount due is chargeable at the rate of 4 per cent. from the date of the final apportionment, but in the case of the Public Health Act the interest is 5 per cent. from the date of demand.

One or two miscellaneous points brought out by this Act may be noticed. Where a Court of Summary Jurisdiction has decided that a street is already a highway repairable by the inhabitants at large, the matter is done with, and the authority cannot again raise the same point even on fresh evidence. (*Wakefield Corporation v. Cooke*).³³ Where a road had a footpath on one side only the frontagers on both sides were held liable for the cost of making it up. (*Clacton Local Board v. Young*).³⁴ In a case at Derby (*Derby Corporation v. Grudgings*),³⁵ a street had already been taken over before being incorporated in an extension of the borough. The Corporation, unaware of this, made it up again. A frontager, knowing the circumstances, ignored the notices, but was held liable for his share as he had not objected within the time limited by the Act.

Local authorities would appear to have a dangerous power in the benefit-derived principle. In a case at Skipton, the Court of Summary Jurisdiction allowed

³³ App. Cas., 31. 1904.

³⁴ 1 Q. B., 395. 1895.

³⁵ *Professional Notes*, vol. vii. p. 72. 1894.

four-fifths of the expenses of making up a street to be apportioned over owners of houses fronting streets which had already been made up, and which led into the street in question, a decision which does not appear to have been appealed against.

THE TAKING-OVER OF PRIVATE STREETS.

Under the Highways Act, 1862, with the consent of owners and occupiers, a highway authority may take over a road in return for its use by the public.

Under the Public Health Act, 1875, where the street is made up to the satisfaction of the local authority, they may declare it a highway repairable by the public at large, unless the majority of owners object within one month. The Public Health Act Amendment Act, 1890, extends this to allow of a part or all of a street being taken over, when *all*, or *any*, of the works enumerated in Section 150 have been done by the *authority*, but it does not touch the case of the owners doing the work themselves. Under the Amendment Act of 1907, also an adoptive Act, the owners can call on the authority to make up the street, and it must then be declared repairable by the public.

Under the Private Streets Works Act, when any or all of the works are done, the authority may take it over, there being no right of objection. When *all* the works are done and paid for, on application of the majority, in value, of the owners, the authority must take the road over within three months.

THE LIABILITY TO REPAIR.

The liability to repair may be upon either the local authority or the private owner, the former being responsible if it has taken the highway over, or otherwise been made liable by statute.

In London, under the Metropolis Management Acts, the borough councils can take a street over unless written objection is made by not less than two-thirds of the owners or rated occupiers. Under the Metropolis Management Amendment Act, 1890, the borough council can do temporary repairs to any road or street which has been thrown open to the public for not less than six months, and can recover the expenses from the owners without prejudice to their power of compelling the paving of the street in due course.

Somewhat similar powers are obtainable in the provinces under the Public Health Act Amendment Act, 1907, but in this case the majority of owners, in number or rateable value, may call on the local authority to proceed under the Private Street Works Act, or Section 150 of the 1875 Act, whichever is in force in the locality. A novel point has been introduced in the 1907 Act, the liability for temporary repairs, if done, being proportional to the *extent* of one's lands fronting, adjoining, or abutting on the street and not to their *frontage*.

In the case of highways laid out before the passing of the Highways Act, 1835, the local authority is liable to repair, the mere throwing open unreservedly to the public and the user by the public being sufficient to produce such liability.

The same Act gives the highway authority power to take any necessary materials from waste lands, and in certain circumstances from private lands, the occupier

having power of objection, such objection being heard by magistrates, and compensation being payable.

In the case of highways laid out after 1835 the liability of the local authority may arise under a course of procedure set out in Section 23, under which, if the road is constructed in a substantial manner and of the width required by the Act, it may, on being used by the public and kept in repair by the owner for twelve months, be declared by magistrates a public highway.

By common law an owner became liable to repair a highway if he fenced it, but the Highways Act, 1864, altered this, and removed the liability if the fences were erected with the written consent of the authorities.

We may summarise the cases in which the liability to repair is upon the public at large :—

- (1) Highways dedicated to the public before August 30th, 1835 ;
- (2) Those dedicated after 1835, under Section 23 of the 1835 Act ;
- (3) Those taken over in return for their use under the Highways Act, 1862 ;
- (4) Those set out under Inclosure Awards ;
- (5) Those taken over after private street works have been done ;
- (6) Those repairable under agreement with owners, under the Public Health Act, 1875, Sections 146 and 148 ;
- (7) Those made by a local authority under an improvement scheme ;
- (8) Main roads taken over by county councils under the Highways and Locomotives Act, 1878, and the Local Government Act, 1888 ;
- (9) District roads under the control of a rural district council under the Local Government Act, 1894.

The extent of the liability of county councils was practically settled by what is known as the Warminster case (*Warminster Local Board v. Wiltshire County Council*),³⁶ in which it was held that the liability included footpaths, crossings, scavenging, &c., but not lighting.

We now come to the liability of private owners. Apart from the cases of private streets not yet made up and taken over, there is a form of liability existing in many cases, known as the liability to repair *ratione tenuræ*. This liability exists where an individual or corporation is bound to repair a highway by reason of a condition attached to his tenure of lands. Persons so liable may transfer their liability to the authorities on paying an annual or capital amount. The person liable is the occupier, under the decision in *Cuckfield Rural District Council v. Goring*,³⁷ and in case of default the authorities can do the work and recover the cost by action.

Persons liable to repair *ratione tenuræ* who have paid a capital sum, even though of nominal amount, in full discharge of such liability are not liable to highway rates, under the House of Lords decision in *Overseers of Dalton v. North Eastern Railway Company*,³⁸ but the existence of a liability to repair *ratione tenuræ*, does not of itself show that there is an exemption from liability to contribute to the repair of other highways in the same district. (*Ferrand v. Bingley Urban District Council*).³⁹

The occupier of a field by occasionally doing small repairs to a public footpath for his own benefit does not

³⁶ *Professional Notes*, vol. vii. p. 186. 1890.

³⁷ *Professional Notes*, vol. ix, p. 132. 1898.

³⁸ *Professional Notes*, vol. x. p. 193. 1901.

³⁹ *Professional Notes*, vol. xii. p. 164. 1903.

necessarily show a liability to repair *ratione tenuræ*, and in a case where a defective stile caused injury to a man the occupier was held not liable. (*Rundle v. Hearle*.)⁴⁰

There appears to be no case determining the liability to repair stiles and gates on public footpaths, but the Local Government Board has expressed the opinion that such expenses are expenses which a parish council can reasonably incur.

EXTRAORDINARY TRAFFIC.

Before leaving the question of repair, attention may be given to a point which is often of interest to the land agent. Extraordinary traffic, according to a judgment of Lord Justice Bowen, "is a carriage of articles over the road at either one or more times, which is so exceptional in the quality or quantity of the articles carried, or in the mode or time of user of the road, as substantially to alter or increase the burden imposed by ordinary traffic on the road, and to cause damage and expense thereby, beyond what is common." (*Hill v. Thomas*.)⁴¹

The basis of all claims for expenses incurred in respect of extraordinary traffic is the Highways and Locomotives Act, 1878, Section 23, as amended by the Locomotive Act, 1898. The former provides that where a certificate of a surveyor is issued to a local authority to the effect that, having regard to the average expenses of repairing the highways in the neighbourhood, extraordinary expenses have been incurred in repairing any highway by reason of extraordinary traffic thereon, such authority may recover from any person by whose order

⁴⁰ *Professional Notes*, vol. ix. p. 138. 1898.

⁴¹ *Professional Notes*, vol. vi. pp. 178 and 278. 1893.

such traffic has been conducted the amount of such expenses. Persons may enter into an agreement with the authority to pay a composition, and are then exempt from proceedings under the section. The words "by whose order" were rather indefinite. The House of Lords held, in *Kent County Council v. Lord Gerard*,⁴² that they did not mean "in consequence of whose order." Lord Gerard, incidental to the alteration of his residence, entered into an agreement with a contractor to deliver materials carriage paid, and neither employed nor paid the actual carriers. He was held not liable for the extraordinary traffic.

The Locomotives Act, 1898, removed the effect of this decision, altering the words of the 1878 Act to "by or in consequence of whose order," the effect of which seems to have given the authorities the right to sue the building owner, builder, traction engine owner, or all three.

Roads should, of course, be suitable for the traffic of the district, and if such traffic is largely due to some prominent local industry such industry should not be crippled by claims of this kind. This was undoubtedly the view taken by the Court in *The Attorney-General v. Scott*,⁴³ which practically decides that an authority must keep its roads in such a state as to be strong enough to carry the traffic which they, as reasonable men, ought to expect on it. This was a case in which the local industry was stone quarrying. Care should be taken in the choice of route, as the claim is not made without specific reference to the highway in question, and in *Geironydd Rural District Council v. Green*⁴⁴ it was held

⁴² *Professional Notes*, vol. viii. pp. 184 and 464. 1897.

⁴³ *Professional Notes*, vol. xiii. p. 114. 1905.

⁴⁴ *Professional Notes*, vol. xv. p. 323. 1908.

that the haulage of timber may constitute extraordinary traffic though the timber business is a recognised industry of the district.

No action can be brought till the expenses have been actually incurred. The 1898 Act provides that proceedings shall be commenced within twelve months of the time of damage, or, in the case of damage in consequence of a contract extending over a long period, within six months of the completion of such contract. In *Storey v. Sheard*,⁴⁵ it was held that proceedings cannot be taken against the executors of a person by whose order the traffic was conducted.

In an action for the recovery of such expenses the road authority must deal only with the particular road in respect of which they are claiming, and show the nature of the ordinary traffic along it, proving the alleged traffic to be extraordinary. The claim must include merely the amount necessary to put the road in such a state of repair as would bear the ordinary traffic, and the offender must not be charged with any expenses incurred by reason of an increase in the ordinary traffic. Any increase in expenditure on the road due to exceptional weather or similar points must also be considered and borne by the authority.

MAKING AND IMPROVING ROADS.

Any local authority can make or improve roads as part of an improvement scheme under the Housing Acts.

In London, under the Metropolis Management Act, 1855, the London County Council can make, widen, or

⁴⁵ *Professional Notes*, vol. v. p. 493. 1892.

improve any roads, streets, or ways, and, under the Amendment Act of 1862, any borough council may, with consent of the London County Council either on their own account or in conjunction with the controlling authority, do the same. The Act does not, however, authorise the removal of any bars, gates, or similar items preventing a thoroughfare into any street without the consent of the owners.

Under the Highways Act, 1862, power is given amongst other items to widen existing roads, level them, cut off corners where land must be purchased for the purpose, make new roads, and build or enlarge bridges.

Under the Public Health Act, 1875, a local authority may purchase any premises for the purpose of widening or otherwise improving any street, or, with the sanction of the Local Government Board, for forming a new street. The Amendment Act of 1907 empowers the authority to require the corners of buildings to be splayed or rounded off, but they must pay compensation.

In a general Paper of this kind the Development and Road Improvement Funds Act, 1909, cannot be given more than passing mention. The newly constituted Road Board has power to make advances to county councils and other highway authorities in respect of the construction of new roads, or the improvement of existing ones, and to itself construct and maintain any new roads which appear necessary. The Board can only proceed with the approval of the Treasury, and local authorities have opportunities of objecting to any new roads proposed by the Board. The improvement of roads means widening, cutting off corners, levelling, dust prevention, and any other work beyond ordinary repairs. The Board can acquire land for new roads, together with a depth of 220 yards on

either side so as to get the advantages of betterment and power over the connection of side roads. Power is given to enable compulsory sale, if necessary, and restrictions are imposed as to the nature of the land which can be taken. The Board has already resolved that in making advances priority of consideration shall be given to proposals for dealing with curves, corners, and cross roads in dangerous places, and for dealing with narrow roads which have no footpaths.

DIVERSION, STOPPING UP, OR ABOLITION OF HIGHWAYS.

A public highway cannot cease to be such except by Act of Parliament or order of Quarter Sessions. Even if disused and overgrown, proof of public rights will enable an order to be obtained for clearing and re-opening it.

The Highways Act of 1835, as amended, provides that if a district council think it expedient, or any other party desires, that a highway, which includes a footpath, should be stopped up or diverted, it shall be viewed by two justices after certain formalities, who may if they agree and after further formalities, issue a certificate giving reasons why the proposal should be acceded to, such certificate being enrolled at Quarter Sessions. Any person aggrieved by the proposal may appeal to the Sessions and the matter will be settled by a jury. If the appeal fails, or if there is no appeal, the Court of Quarter Sessions will make an order for diversion or stopping up. The consent of both parish council and district council is necessary in a rural parish.

Under the Highways and Locomotives Act, 1878, where any highway authority considers a highway unnecessary for public use, application may be made

to a Court of Summary Jurisdiction, and two justices shall view the road. If the Court agree with the proposal they must see that one month's public notice is given of the time and place for hearing objections, and also one month's notice to all owners and occupiers of abutting lands, &c. After hearing any objections the Court can allow or dismiss the application. In the former case an order is issued declaring the highway to be no longer repairable by the public. An appeal lies to Quarter Sessions, and such Sessions has also power to issue an order on application supported by evidence that through change of circumstances the road has again become of public use, directing the liability of the public to revive as regards repairing it. It should be noted that this matter is a different one to stopping a road up, since the order does not abolish the highway, and it remains dedicated to the public, though no longer repairable by them.

The Housing, Town Planning, &c., Act, 1909, provides that the Local Government Board may prescribe a general code of provisions for town planning schemes, such provisions including the stopping up or diversion of roads or other ways, amongst many other things.

ROADSIDE WASTES, HEDGES, AND DITCHES.

The probable origin of most roadside wastes was due to an ancient right to pass over unenclosed land at the side of the road if the roadway was out of repair. The owners can, as a rule, let the right of pasturage on roadside wastes, but the herbage at the sides of highways is sometimes the property of the local authority. The adjoining owners may not enclose the wastes; such

enclosure amounting to an obstruction which any member of the public might take proceedings to remove. The Local Government Act, 1894, makes it the duty of the district councils to prevent unlawful encroachments on roadside wastes. Such councils may remove encroachments without first bringing an action, and may recover the expenses of so doing.

The Highways Act of 1835 compels the surveyor of highways to maintain a clear width of 20 feet where the space between the road fences will allow of this being done without infringing the rights of the adjoining owners. Where the latter have enclosed, the hedge and ditch belong to them absolutely, the public roadway only extending to the edge of the ditch. The curtailment of ditches is generally done with the consent of the owners, but in case of refusal the Act provides that the authority may take the extra ground and pay compensation, there being some restrictions as to minerals, timber, parks, nurseries, &c.

The same Act gives the highway authority power to cleanse, scour, and keep open all ditches adjoining highways. It is the custom to request the owners to do this, but if they fail, and the authority does the work, the Act provides that the ditches shall be thenceforward under their control, and the original owners liable for interfering with them.

While dealing with hedges and ditches a few notes as to fences may be given. The Quarry (Fencing) Act, 1887, provides that dangerous excavations within 50 yards of a highway, or other open place dedicated to the public, shall be properly fenced or otherwise dealt with as a nuisance under the Public Health Acts. The Barbed Wire Act, 1893, provides that barbed wire adjoining a highway may be indicted as a nuisance. When barbed

wire was first introduced many actions for damage occurred. In one typical case just before the passing of the Act the wind blew a man's coat against a barbed wire fence, and the coat was torn. The Court of Appeal held the fence to be dangerous to the public, and a nuisance. (*Stewart v. Wright*.)⁴⁶

It is necessary to keep fences adjoining highways in a safe condition. Where a child stood on a fence which was rotten, and which fell on him and hurt him, the Court of Appeal held that the defective fence was a nuisance and caused the injuries, and that the defendant was liable. (*Harrold v. Watney*.)⁴⁷

OBSTRUCTIONS, PROJECTIONS, AND ENCROACHMENTS.

Generally speaking, any person has a common law right to remove obstructions to a highway, but must show his necessity for travelling over the part obstructed. There are, however, certain legal obstructions. Thus the Highways Act, 1835, made it the duty of the authority to provide direction posts, and the General Turnpike Act, 1822, empowered turnpike trustees to erect milestones, this power being extended to local authorities by the Highway Rate Assessment and Expenditure Act, 1882.

The Motor Car Act, 1903, legalises the erection of danger signs. The Public Health Acts in the provinces, and the Metropolis Management Acts in London, make it necessary to erect hoardings, with platforms, hand-rails, &c., as may be required where building works are going on on adjoining footways. This is done in London by written licence from the local authority.

⁴⁶ *Professional Notes*, vol. vi. p. 184. 1893.

⁴⁷ *Professional Notes*, vol. ix. p. 222. 1898.

The Telegraph Acts empower the erection of poles on highways with the consent of the local authority. In some cases telephone companies get similar powers under licence from the Postmaster-General under the Telegraph Acts. Poles erected without statutory powers are a nuisance and indictable.

The grass strips at the sides of the roads and the hedge and ditch belong to the adjoining owner, who merely dedicates a right of passage over the road. The local authorities have, therefore, no power to grant permission to companies for the erection of poles in the absence of statutory authority, and it is doubtful if the owner can do so if the poles would interfere with the public rights of passage. Both the Post Office and the National Telephone Company pay wayleaves where poles are put in between the inner and outer butts of hedges. It is, I think, rather doubtful if local authorities need do so in the case of sewer vent-shafts, unless the owner's rights can be shown to be affected.

If trees are blown down across the road the local authority has power to remove them under the Local Government Act, 1894, and under the decision in *Louth Urban District Council v. West*,⁴⁸ would appear to be able to recover the cost of so doing.

Wires across a highway at any height could be objected to by owners of the soil, but damages would not be likely to be obtained if no injury could be shown. They cannot, however, be objected to by the local authority if high enough not to interfere with traffic. (*Wandsworth Board of Works v. United Telephone Company*.)⁴⁹

Where a private person is injured, such as by diffi-

⁴⁸ 65 L. V., Q. B., 535. 1896.

⁴⁹ 13 Q. B. D., 904. 1884.

culty of access to his premises owing to works carried out by a local authority under statutory powers, even if the works have been unreasonably delayed, an action for damages will not lie unless he can show that he has been injured specially, directly, and substantially. (*Martin v. London County Council.*)⁵⁰

The Towns Police Act, 1847, requires the projecting blinds and awnings of shops to be not less than 8 feet from the ground. The Towns Improvement Act, 1847, deals with projections into streets, enacting that anything which is an obstruction to the safe and convenient passage along any street whether overhead or under foot, may be ordered by the local authority to be removed. The Metropolis Management Act, 1855, provides that if projections existing before the commencement of the Act are an annoyance, or dangerous to traffic, they may be removed or altered by the local authority, who must pay compensation for any damage sustained. In the case of such obstructions formed after the Act, the owner may be given fourteen days' notice to remove or alter them at his own expense.

An urban district council has power to remove encroachments on any highway vested in it without first taking proceedings against the offender. (*Reynolds v. Presteign Urban District Council.*)⁵¹

The Highways Act, 1835, provides that no tree, bush, or shrub shall be planted within 15 feet of the centre of the highway (*i.e.*, the centre line of the metalled portion). Also that if owners neglect to trim their hedges and trees to the detriment of the highway, they may be summoned and the justices may make orders calling on them to do so within ten days, failing which the authority

⁵⁰ *Professional Notes*, vol. ix. p. 234. 1898.

⁵¹ *Professional Notes*, vol. xiii. p. 93. 1896.

may do the work and recover the cost. The Act makes sound provisions as to the time during which pruning or cutting shall be done by the authority or required of the owner.

The Highways Act, 1864, also deals with encroachments, providing that if anyone encroaches in any way within 15 feet of the centre of the highway, or by removing soil or turf from the sides except for improving the road, and by order, he shall be liable to penalties, and for the expenses of restoring the highway to its original state. The Act also provides that where fences exist on both sides no encroachment shall be allowed which would reduce the width between the fences to less than 30 feet.

I feel that I have trespassed beyond the usual length of a Paper at this Institution, but would plead excuse that the subject is an extremely wide one, and one in which, with such trespass, it is possible to give a few notes which may be of service to members of each branch of the profession.

APPENDIX I.

THE METROPOLIS MANAGEMENT ACT, 1855.

Section 105. In case the owners of the houses forming the greater part of any new street laid out or made or hereafter to be laid out or made, which is not paved to the satisfaction of the vestry or district board of the parish or district in which such street is situate, be desirous of having the same paved, as hereinafter mentioned, or if such vestry or board deem it necessary or expedient that the same should be so paved, then and in either of such cases such vestry or board shall well and sufficiently pave the same, either throughout the whole breadth of the carriage-way and foot-paths thereof, or any part of such breadth, and from time to time keep such pavement in good and sufficient repair; and the owners of the houses forming such street shall, on demand, pay to such vestry or board the amount of the estimated expenses of providing and laying such pavement (such amount to be determined by the surveyor for the time being of the vestry or board); and in case such estimated expenses exceed the actual expenses of such paving, then the difference between such estimated expenses and such actual expenses shall be repaid by the said vestry or board to the owners of houses by whom the said sum of money has been paid; and in case the said estimated expenses be less than the actual expenses of such paving, then the owners of the said houses shall, on demand, pay to the said vestry, or board, such further sum of money as, together with the sum already paid, amounts to such actual expenses.

APPENDIX II.

THE PUBLIC HEALTH ACT, 1875.

Section 150. Where any street within any urban district (not being a highway repairable by the inhabitants at large) or the carriage-way, footway, or any other part of such street is not sewered, levelled, paved, metalled, flagged, channelled, and made good or is not lighted to the satisfaction of the urban authority, such authority may, by notice addressed to the respective owners or occupiers of the premises fronting, adjoining, or abutting on such parts thereof as may require to be sewered, levelled, paved, metalled, flagged, or channelled, or to be lighted, require them to sewer, level, pave, metal, flag, channel, or make good or to provide proper means for lighting the same within a time to be specified in such notice.

Before giving such notice the urban authority shall cause plans and sections of any structural works intended to be executed under this section, and an estimate of the probable cost thereof, to be made under the direction of their surveyor, such plans and sections to be on a scale of not less than one inch for eighty-eight feet for a horizontal plan and on a scale of not less than one inch for ten feet for a vertical section, and, in the case of a sewer, showing the depth of such sewer below the surface of the ground; such plans, sections, and estimate shall be deposited in the office of the urban authority, and shall be open at all reasonable hours for the inspection of all persons interested therein during the time specified in such notice; and a reference to such plans and sections in such notice shall be sufficient without requiring any copy of such plans and sections to be annexed to such notice.

If such notice is not complied with, the urban authority may, if they think fit, execute the works mentioned or referred to therein; and may recover in a summary manner

the expenses incurred by them in so doing from the owners in default, according to the frontage of their respective premises, and in such proportion as is settled by the surveyor of the urban authority, or (in case of dispute) by arbitration in manner provided by this Act; or the urban authority may by order declare the expenses so incurred to be private improvement expenses.

The same proceedings may be taken, and the same powers may be exercised in respect of any street or road of which a part is or may be a public footpath or repairable by the inhabitants at large as fully as if the whole of such street or road was a highway not repairable by the inhabitants at large.

APPENDIX III.

THE PRIVATE STREET WORKS ACT, 1892.

Section 6.—(1) Where any street or part of a street is not sewered, levelled, paved, metalled, flagged, channelled, made good, and lighted to the satisfaction of the urban authority, the urban authority may from time to time resolve with respect to such street, or part of a street, to do any one or more of the following works (in this Act called private street works); that is to say, to sewer, level, pave, metal, flag, channel, or make good, or to provide proper means for lighting such street, or part of a street; and the expenses incurred by the urban authority in executing private street works shall be apportioned (subject as in this Act mentioned) on the premises fronting, adjoining, or abutting on such street, or part of a street. Any such resolution may include several streets, or parts of streets, or may be limited to any part or parts of a street.

(2) The surveyor shall prepare, as respects each street or part of a street—

- (A) A specification of the private street works referred to in the resolution, with plans and sections (if applicable);
- (B) An estimate of the probable expenses of the works;
- (C) A provisional apportionment of the estimated expenses among the premises liable to be charged therewith under this Act.

Such specification, plans, sections, estimate, and provisional apportionment shall comprise the particulars prescribed in Part I. of the Schedule to this Act, and shall be submitted to the urban authority, who may by resolution approve the same respectively with or without modification or addition as they think fit.

(3) The resolution approving the specifications, plans, and sections (if any), estimates, and provisional apportion-

ments, shall be published in the manner prescribed in Part II. of the Schedule to this Act, and copies thereof shall be served on the owners of the premises shown as liable to be charged in the provisional apportionment within seven days after the date of the first publication. During one month from the date of the first publication the approved specifications, plans and sections (if any), estimates and provisional apportionments (or copies thereof certified by the surveyor), shall be kept deposited at the urban authority offices, and shall be open to inspection at all reasonable times.

Section 7. During the said month any owner of any premises shown in a provisional apportionment as liable to be charged with any part of the expenses of executing the works may, by written notice served on the urban authority, object to the proposals of the urban authority on any of the following grounds (that is to say) :—

- (A) That an alleged street or part of a street is not or does not form part of a street within the meaning of this Act ;
- (B) That a street or part of a street is (in whole or in part) a highway repairable by the inhabitants at large ;
- (C) That there has been some material informality, defect, or error in or in respect of the resolution, notice, plans, sections, or estimate ;
- (D) That the proposed works are insufficient or unreasonable, or that the estimated expenses are excessive ;
- (E) That any premises ought to be excluded from or inserted in the provisional apportionment ;
- (F) That the provisional apportionment is incorrect in respect of some matter of fact to be specified in the objection or (where the provisional apportionment is made with regard to other considerations than frontage as hereinafter provided) in respect of the degree of benefit to be derived by any persons, or the amount or value of any work already done by the owner or occupier of any premises.

For the purposes of this Act joint tenants or tenants in common may object through one of their number authorised in writing under the hands of the majority of such joint tenants or tenants in common.

Section 8.—(1) The urban authority at any time after the expiration of the said month may apply to a court of summary jurisdiction to appoint a time for determining the matter of all objections made as in this Act mentioned, and shall publish a notice of the time and place appointed, and copies of such notice shall be served upon the objectors; and at the time and place so appointed any such court may proceed to hear and determine the matter of all such objections in the same manner as nearly as may be, and with the same powers and subject to the same provisions with respect to stating a case, as if the urban authority were proceeding summarily against the objectors to enforce payment of a sum of money summarily recoverable. The court may quash in whole or in part or may amend the resolution, plans, sections, estimates, and provisional apportionments, or any of them, on the application either of any objector or of the urban authority. The court may also, if it thinks fit, adjourn the hearing and direct any further notices to be given.

(2) No objection which could be made under this Act shall be otherwise made or allowed in any court proceeding or manner whatsoever.

(3) The costs of any proceedings before a court of summary jurisdiction in relation to objections under this Act shall be in the discretion of the court, and the court shall have power, if it thinks fit, to direct that the whole or any part of such costs ordered to be paid by an objector or objectors shall be paid in the first instance by the urban authority, and charged as part of the expenses of the works on the premises of the objector or objectors in such proportions as may appear just.

Section 9.—(1) The urban authority may include in any works to be done under this Act with respect to any street or part of a street any works which they think necessary for bringing the street or part of a street, as regards

sewerage, drainage, level, or other matters, into conformity with any other streets (whether repairable or not by the inhabitants at large), including the provision of separate sewers for the reception of sewage and of surface water respectively.

(2) The urban authority in any estimate of the expenses of private street works may include a commission not exceeding five pounds per centum (in addition to the estimated actual cost) in respect of surveys, superintendence, and notices, and such commission when received shall be carried to the credit of the district fund.

Section 10. In a provisional apportionment of expenses of private street works the apportionment of expenses against the premises fronting, adjoining, or abutting on the street or part of a street in respect of which the expenses are to be incurred shall, unless the urban authority otherwise resolve, be apportioned according to the frontage of the respective premises ; but the urban authority may, if they think just, resolve that in settling the apportionment regard shall be had to the following considerations (that is to say) :—

- (A) The greater or less degree of benefit to be derived by any premises from such works ;
- (B) The amount and value of any work already done by the owners or occupiers of any such premises.

They may also, if they think just, include any premises which do not front, adjoin, or abut on the street or part of a street, but access to which is obtained from the street through a court, passage, or otherwise, and which in their opinion will be benefited by the works, and may fix the sum or proportion to be charged against any such premises accordingly.

DISCUSSION.

Mr. W. EDWARD WOOLLEY (Member of the Council) said he was sure they were all much obliged to Mr. Blake for his interesting and able Paper, which contained a complete resumé of the law affecting every description of road or street. Anyone attempting to pick holes in the Paper would find that he had undertaken a most difficult task. He would therefore confine himself to giving his own experience of the operation of some of the different Acts cited by Mr. Blake, with perhaps a few observations on the necessity for further legislation.

He thoroughly agreed with the author of the Paper that the Highways Acts needed consolidation. He had felt that especially when dealing with roadside wastes, the ownership of which was different in many cases, and was frequently very hard to determine. He might instance the case of an estate, of which he had the management, where the owner was compelled by the County Council to cut the bushes growing on the roadside waste, whereas within half a mile of the same spot the County Council allowed the Parish Council to let the waste for grazing purposes. Whilst on the subject of roadside wastes he would like to protest against their enclosure, which was done chiefly by the adjoining owners or parish councils, and was a practice much to be deprecated. Perhaps he should have said that it was the practice in the past rather than in the present, because it was now more guarded against and the roads were protected.

The laying out of new streets was a subject on which he felt he might lay claim to considerable experience, and he had always regretted the fact that although in many provincial towns the main streets

were much too narrow, and likely to need widening in the near future, the local authority so often allowed old premises to be pulled down and new ones to be erected on the old sites.

With regard to the taking over of new streets, the policies pursued by the different local authorities were so varied, and in some cases so short-sighted, that he would welcome legislation which would lay down a uniform principle on which new streets would be taken over. He had known authorities who made it a rule never to take over a street until it was built on. An owner might lay out a street which although not built over for some time might be used largely by traffic as a short cut from one part to another, and the refusal of the authority to take over such a road would be an obvious injustice to the owner. He quoted that instance from actual experience.

He had come across several instances of roads repairable *ratione tenuræ*, and in his opinion they were neither to the advantage of the owner nor occupier. Such roads were frequently used for what he might term foreign traffic which might injure them to a considerable extent. In such cases the cost fell not on the public, but on the occupier, which was obviously a hardship.

On the question of extraordinary traffic he held strong views, which very likely were in direct conflict with those of leading legal gentlemen. He considered the principle laid down under that head, to a great extent, deprived land owners of their due. Take the case of an estate on which a good deal of planting was done. For perhaps twenty years that land although paying rates produced no income; at the end of that period the landlord sold some of his timber, and the merchant fetched it away with a traction engine and lorries. Those things certainly did make a mess of the

roads, and the authorities promptly claimed for extraordinary traffic. That was a case quoted from actual experience, and he maintained that it entailed great hardship on the owner, for if he could not use the roads for such purposes as those mentioned what use were they to the estate?

In conclusion, might he say a few words on the subject of recent legislation as affecting streets and highways; he referred to the Housing, Town Planning &c., Act, and the Development and Roads Improvement Funds Act, 1909. Both statutes were to be welcomed, if properly used. The advent of motors and other propelled vehicles on the road had made legislation necessary, and he believed the Development and Roads Improvement Funds Act would, if properly worked, fill a want in that respect. He knew an old Roman road, called the Fosseway, running from Lyme Regis in Dorsetshire to the Humber. It was in the main a good road, which, although passing through several towns of size, ran chiefly through rural districts; such a road, with a certain expenditure, would be very useful for long-distance motor traffic, and would thus relieve the already congested streets of many towns. Steps had already been taken in Nottinghamshire to remake several portions of that road which were impassable.

It was early as yet to forecast the result of the working of the Housing, Town Planning, &c., Act, but from the little he had had to do with it he had come to the conclusion that the worst enemy to that Act would be the inertia of local authorities.

There were many other points such as dust nuisance which, if not coming under the subject of Highway Law, should be the subject of immediate legislation, but he would leave these questions in more competent hands, and would content himself with proposing a

hearty vote of thanks to Mr. Blake for his excellent Paper.

Mr. E. W. RUSHWORTH (Fellow) said he had great pleasure in seconding the vote of thanks to Mr. Blake. When he had been asked to do so he had been pleased to accept the agreeable task, and had hoped that as the Paper unfolded itself he would have come across statements that he could dispute and others which he could criticise ; he was bound to say, however, he had been disappointed in that. There was little indeed that he could dispute and practically nothing that he could criticise.

With regard to the numerous Acts of Parliament mentioned, they appeared to him to be unnecessarily complicated by the endeavour to provide for hard cases. In his opinion it was much better to have simple rules that anybody could understand and to leave the hard cases to take care of themselves. An instance had been mentioned in the Paper of a hard case where a man had a long flank frontage to a road about to be made up. He felt that the flank frontage was of very little use to him and it was hard that he should have to contribute a large sum for making up the road according to the number of feet occupied. But, on the other hand, they must remember that when surveyors dealt with such property one of the first things they thought of was that liability. When advising anybody to purchase such a property they took into account the very large sum which would have to be expended on making up the road. Under the usual procedure surveyors knew where they were and could make their calculation by taking out the number of feet frontage, but if they had to calculate the liability on a principle of benefit derived they at once

embarked on troubled waters and innumerable disputes would arise. Of course a man might purchase such a property without taking professional advice, but if he were so unwise as that he must take the risk.

He would not occupy their time by attempting criticisms, but would content himself with seconding the vote of thanks to Mr. Blake for his very interesting and valuable Paper. When he said that he knew he was making use of terms applied to nearly every Paper that was read in that room, but he ventured to think that it was even more applicable in regard to the present Paper than to others which they had listened to in that Hall.

Mr. H. CUBITT (Professional Associate) said he was sure they would all agree that Mr. Blake had taken up a very heavy burden in dealing with both the provincial and the metropolitan law. To deal with both was more than most men were capable of doing, and for himself he proposed to confine his remarks entirely to the metropolitan law, in which he thought a good many of those present were interested. He noticed that Mr. Blake said that in laying out streets difficulties did not occur where new streets were formed *de novo*, but he thought in London they did occasionally find difficulties. Possibly before the 1894 Act came into force there was not so much trouble, but now since Section 8 of that Act provided that the laying of the foundation of a house, in such a manner that it might become one of three abutting on a strip of land, constituted the formation of a street, it was obvious that a person might, in the circumstances, form a street when he had no intention whatever of doing so. There was indeed a proviso to that section which said that if a person did any such thing for some purpose other than that of

forming a street, he did not form a street, but the section was so complicated that it was often very difficult to say whether or not a person was forming a street when he built only one or two houses.

He noticed that cases with regard to new streets under the Metropolis Management Acts were quoted, but as regards the formation of streets under the Building Act, it was said that in the majority of instances it had been held to be a question of fact to be decided by the magistrate. There were, however, one or two important cases where the magistrates' decisions were reversed; there was a noteworthy instance in Whitechapel, where a place used as a market, having gates at both ends, was held by the High Court to be a street and the magistrate's decision reversed. He thought it must be admitted that no one could understand the provisions of Part II. of the Building Act without making a close study of the case law.

Then there was the question whether or not any particular street was a highway, which was a matter of great importance, because two of the most important sections of the Building Act, *i.e.*, Sections 13 and 22, dealt with buildings abutting on highways; at least it appeared to him that the provisions of Section 22 dealing with the general line of building applied only to buildings erected on highways. The section did not say so definitely, but it referred to lines of buildings at a certain distance from the highway, and it appeared by implication that the section only applied to a street which was a highway. The county council in approving of the application for a new street were in the habit of making a condition that the street should be thrown open to the public as a highway, but as that condition did not appear in the standard requirements

of Section 9 it seemed to him that the council could not make that condition if the owner objected. Supposing that condition were not made it was a question whether a street formed under the Building Act, and open at both ends, was in the circumstances a highway.

Then, of course, there was also the question of old streets which were formed before the passing of the present Act. There were sometimes streets or ways leading round to the back of houses and usually open at the ends, and it was a most difficult question to his mind to decide whether such were highways or merely ways. If Mr. Blake could give them any information on that question he for one would certainly be very grateful.

He noticed with regard to the making up of streets that the distinction between new streets under the Building Act and new streets under Section 105 of the Metropolitan Management Act of 1855 was emphasised. Of course a new street under the Building Act need not have houses upon it, but it had been held in several cases that a new street under Section 105 must have houses at least on one side.

Mr. Blake had been very precise in quoting the exact title of an Act which most people termed the Housing and Town Planning Act, but the same precision had not been observed in a reference to the Amendment Act of 1890. This might be misleading, for there were two amending Acts of that year, the correct title of the Act referred to was, he thought, the Metropolitan Management 1862 Amendment Act, 1890.

Then the case of the *Camberwell Vestry v. Hunt* (1887) was mentioned, and it was stated that in that case it was held that when the county council had repaired a street they must continue to do so; but it appeared to him that the Amendment Act, 1890, the second of

the two Acts, was possibly passed to give the borough councils the power of getting out of that decision. It seemed to him that the borough councils if they wished temporarily to repair a street would not exercise their powers under the Act of 1855, but would put in force the powers under the Amendment Act of 1890. He noticed it was said that "the borough councils "can take a street over unless written objection is made "by not less than two-thirds of the owners or rated "occupiers." He did not know that section. But there was Section 80 of the Amendment Act of 1862, which said a borough council could repair a street where objection was not made by more than that number of owners or occupiers, and possibly the same section was referred to.

It was stated with regard to hoardings that they were required under the Metropolitan Management Act. That was so, but as to platforms next the street he did not think the Metropolitan Management Act dealt with them. He thought requirements were to be found in a section of the London County Council (General Powers) Act of 1890, where borough councils had power to require handrails and platforms next the street.

He would refer to one more point, and that was the question of the City. In dealing with the London building law the City was always a great deal of trouble, and he noticed that Mr. Blake had quietly dropped it overboard. That might be justified by the fact that the City only occupied about a one-hundredth part of the area of London, but he thought some consideration might have been given to it, particularly as the law in several instances was quite different from that in the rest of London.

As regards the formation of streets, the Building

Act applied in the City with very small modification ; but when one came to the question of paving private streets he believed the City of London Sewers Act of 1848 was the Act under which proceedings were taken, and it might be of interest to know that under that Act, if it still applied as he believed it did, the requirements were that the owners should pay only one-third of the cost of paving the street.

Then there was the question of the closing of highways which was of interest. He gathered from Section 115 of the Highways Act of 1835 that that Act did not apply to the City, but it seemed that under Section 79 of Michael Angelo Taylor's Act, courts, &c., if undesirable, could be closed on application to the justices. If they made an investigation of the City Acts he hoped they might be spared somewhat of a shock that he sustained recently while looking through the 1897 Act, which abolished the Commissioners of Sewers and gave their powers to the Corporation. He noticed that amongst the Acts there cited, under which the Commissioners were the local authority, the Private Street Works Act, 1892, was given. He at first got the impression that his former ideas were all wrong, and that the Act applied to London, but after investigation he came to the conclusion that it must be an error of a Parliamentary draughtsman, for he believed the Act only applied to urban districts and to rural districts with the consent of the Local Government Board.

He felt he must apologise for taking up the time of the Meeting, but he took a keen interest in the matter and Mr. Blake's Paper was a kind of meat extract of the Highways Acts, and there were so many subjects worthy of discussion that when one started it was difficult to leave off.

Mr. J. W. TYLER (Fellow) said he should like to add his meed of praise to Mr. Blake for his complete and comprehensive Paper on an intricate subject. Anyone reading it would come to the conclusion that the provisions with regard to making up and taking over highways were exceedingly complicated, and that it would be necessary for him in whatever part of the country he found himself to search out and see the various Acts and powers under which local authorities were acting, or he would soon be at sea.

There was one point in Mr. Blake's Paper which he would like to illustrate. It referred to the question of making up the roads before they were taken over. A case was decided last week before the magistrates in the Epsom district, where the Epsom Rural District Council had power under the Private Street Works Act, and were exercising that power for making up certain roads in what was really part of the town of Sutton, but which was partly in the district of the Epsom Rural District Council, and there a number of the frontagers were opposed to the apportionment of the expense on two points—one, on the question of tar paving on footpaths, and the other on the question of whether the whole of the metalling should be taken up and renewed, or merely sufficient fresh metalling put on the road to bring it up to the required thickness. Mr. Blake's experience was probably like his own, that local authorities often caused unnecessary expense by carting away the whole of the old metal and bringing fresh metal, and in this case the frontagers took exception to it. The case was pressed before the magistrates, with the result that they ordered that only sufficient metalling was to be put on the road to bring it up to the thickness of six inches, *i.e.*, that the existing

metalling was to be taken into account; and that tar paving was not necessary. He mentioned that to illustrate what magistrates would do if they were pressed, but people were very hard to move; his experience had sometimes been that where there was already good metalling on the roads, the local authority came and carried away the whole of the metalling and hard core, and put the frontagers to the expense of 12s. or 14s. a foot in making up a road, which was quite unnecessary.

He would repeat his appreciation of the very many useful points in Mr. Blake's Paper.

Mr. A. B. HOWES (Associate) said that when he came to the Meeting he was asked if he wished to speak, and had replied that it was not his intention to do so, because he knew the Paper was written by Mr. Blake, and that there would, therefore, be very little to discuss or to criticise in it.

He would, however, mention a point that Mr. Blake did not deal with, namely, the liability of property owners in the matter of overhanging trees. He mentioned it because he had recently had an interesting case on this subject. An action was brought by a man who was getting on to a motor omnibus. Previously there had been only a horse omnibus on the route, and of course a motor omnibus was considerably higher, and when he got to the top, and before he sat down, he was struck on the head by an overhanging tree in a churchyard. It was rather a curious point as to liability. The injured man brought an action against the vicar of the church and was successful in recovering damages. It was a perfectly sound decision and dealt with a rather interesting point on the liability of property owners,

which, in view of the growing number of motor omnibuses and their increased height, they would do well to realise. He thought he would mention that case as it was a point not covered by Mr. Blake's Paper.

Mr. JOHN F. WILKES, M.A. (Professional Associate) said he was a country man, and somewhat of a stranger at the Meetings, but he had undertaken a five-miles drive in the rain and a forty-mile railway journey to hear Mr. Blake read his Paper, and he felt well rewarded.

A subject of great interest in the country at the present moment was that of public footpaths. Before the days of parish councils, rural district councils, and urban district councils, landowners had frequently made paths for people to take their Sunday walks, and ever since those times, say fifty or sixty years ago, those paths had been used by the local villagers for their walks. As trains and motor cars and such-like conveniences brought strangers into those villages, the question naturally arose whether or no those footpaths were public footpaths, and in many cases friction had arisen through the landowners either trying to stop the paths or diverting them, and in dealing with such matters a great deal of tact had been required. Possibly many others in the room would be interested to hear the best way of arriving at a conclusion as to what were public footpaths and what were not. This was an important matter in connection with the forms they had to fill in under the Finance Act.

Another point which was of great interest to many round his district was in whom was the ownership of the dust on the roads vested when it was gathered up into heaps? On highways, did it belong to the owner

of "adjacent property," and on the main roads was it vested in the county council? In many places it was of value to the local builders and to estate owners, and property owners had been in the habit of sending their carts and getting that dust, or sand he should say, to make their mortar. This was especially so when there was no sand in the district.

He brought those points forward, and he would be glad if Mr. Blake could give him any advice.

The PRESIDENT, in putting the vote of thanks, said he was sure they had all listened to Mr. Blake's Paper with the greatest possible interest, and he personally thanked him for the labour and time he had spent in preparing so important a contribution to their *Transactions*.

The last speaker had raised the question as to some way of dealing with the question of footpaths under the Finance Act. He saw a large number of gentlemen from Somerset House present, and he was sure that they would be only too ready to give him any information after the Meeting was over.

The vote of thanks having been put to the Meeting and carried with acclamation—

Mr. BLAKE, in reply, desired to thank them heartily, not only for the vote of thanks, but also for the kind hearing they had accorded him throughout his very long Paper.

When he started writing it he realised that he had tried to do too much. He had put together enough notes for a Paper which would have taken over an hour and a half to read. That would not do, and he had been

compelled to throw overboard one thing after another, and, as had been suggested during the discussion, he had to throw out the City. It was not done with "malice aforethought," but merely to shorten the Paper. Although the City was so important a part of the Kingdom yet with regard to its highways it was relatively unimportant compared with the country and the metropolis as a whole.

As to the question of laying out a London street, he agreed that the case was not quite clear when laying out a street where hitherto there had been none, and certain difficulties would now and then arise; but in his experience those difficulties were rare. He recollected one case where a man took a building plot which was shown on a plan as a corner plot, and he erected a shop on it. It was shown that the road was not defined, and he had no power to lay it out, and no power over the land adjoining, but he was summoned on the ground that he was laying out a new street merely because he had put up a corner shop with windows fronting both ways. As he had no power over the adjoining land the summons was dismissed.

Mr. Cubitt had disagreed with his statement that whether a man was laying out a new street or not was a matter of fact for the magistrates to determine. It was true that there had been cases which magistrates had determined, and a higher Court had reversed their decision, but the impression he had meant to convey in his Paper was that in most cases when the Court had been troubled with such a question, it had said very plainly that such matters ought not to have been brought before them, and that the case should have been settled by one who knew the locality.

He had felt compelled to exclude from his Paper the

question of the building line as it would have opened up such a vast field, and although it was in his original notes it had had to be cut out.

Mr. Cubitt had rather questioned the accuracy of his statement with reference to the taking over of streets under the Metropolis Management Acts. The facts were, however, that under Section 106 of the 1855 Act, as amended by Section 80 of the 1862 Act, the borough council may, if they think fit, by written notice put up in any part of any street not being a highway, declare their intention of repairing the same, and thereon the same shall become repairable by them for ever, but if objection is made in writing by two-thirds of the owners or rated occupiers, such procedure is not to take effect. This it would be seen amounted, to all intents and purposes, to taking the road over as stated in the Paper.

In writing about the hoardings put up in London for buildings in course of erection he had inadvertently included handrails and footways, but the latter were not put in under the Metropolis Management Act, but under a later Act.

Footpaths in woods, where lovers liked to walk, always presented difficulties. But Form VII. would no doubt be a considerable factor in settling whether those footpaths were easements or general rights of way.

Speaking generally he would say that if the footpaths had been used by the public at large for, say, twenty years, it would be very difficult to defeat the public right to use them.

Whether or not a private owner had the right to take the mud and dust put at the side of the road, he generally did take it, and, as a matter of fact, it was generally the case of taking all one could get if no one was looking! He (the speaker), however, had never yet

succeeded in finding any statutory power that could entitle one to do it, and he believed if the local authority liked to put someone there to note who took it, steps could be taken to prevent such appropriation.

He thanked them very much for the kind reception they had given him.

The Meeting then closed.

THE CONSERVATION OF OUR NATIONAL WATER RESOURCES.

BY WILLIAM RALPH BALDWIN-WISEMAN,
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*Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION held on Monday, 23rd January, 1911.*

LESLIE ROBERT VIGERS (President) in the Chair.

I.—GENERAL INTRODUCTION.

The steady growth of population and the general development of science and industry have given rise to an increasing demand for water, which brings more and more forcibly before all interested parties the urgent need for the formulation of a comprehensive scheme of water conservancy, to replace the present chaotic and piecemeal system of water administration.

As legislative attempts may be made in the immediate future to formulate such a scheme or to afford the machinery for more equitably adjusting the conflicting claims of an increasing population, it may not be inappropriate briefly to review in this Paper past and present attempts at State administration of hydraulic works and the suggestions of advocates of conservancy in this country.

II.—HISTORICAL INTRODUCTION.

Over 4,100 years ago the central government had the sole control of the splendid canal system which was used for upwards of 2,600 years by successive Babylonian, Assyrian, Grecian, Parthian, Roman and Sassanian administrations, not only for inland navigation and irrigation, but also in controlling the flood waters of the Euphrates and Tigris.

In Egypt canals were dug to the order of Meryra between 3467 and 3447 B.C.; official records of the height of the Nile flood were taken annually from 3400 B.C.; and nilometers connected by a fairly good series of levels were established at an early date at most of the more important towns along the river, such as Memphis, Karnak, Luxor, Esna, Edfu and Philae.

Extensive tank storage for irrigation purposes was provided by Pandinousa, King of Ceylon, near his capital of Anuradhapore in 504 B.C., and subsequent monarchs extended the system, the remains of which are now scattered all over the country.

Rome instituted a system of water supply for its capital in 312 B.C., and steadily added to it during 540 years, so that some of the later successors of M. Agrippa in the office of *curator aquarum* had under their charge no less than 365 miles of aqueduct, through which flowed a daily supply of 30,000,000 gallons, drawn from various springs and streams more or less remote from the city.

Works of water supply, drainage and inland navigation of considerable magnitude were also undertaken in various Roman colonies.

The Spaniards on their arrival in Peru in the sixteenth century found an elaborate irrigation system, which it

is thought had been developed by Manco Capac or subsequent Incas three or four centuries previously.

The zenith and the decline of Mogul dominion in India is marked by the development and obsolescence of extensive canal systems, such as that from the Chouting river to Hansi and Hissar, constructed by the Emperor Feroze Toghlak in 1351, the Western Jumna Canal constructed by the Emperor Abkar in 1567, and the Delhi Canal constructed by Ali Murdan Khan, to the orders of the Shah Jehan in 1626; in addition to these greater works individual efforts towards the utilisation of the water resources of a locality, or in the improvement of waste land, were encouraged by the Government so early as the end of the fourteenth century by the remission of taxes, for a term of years, on the land so improved.

III.—THE PLEA FOR REFORM.

In this country the State at various times has delegated its rights in the land and the water thereon by grant, prescription, or Act of Parliament to individuals, companies, commissions, boards and local authorities, and although in making the grant care has been taken to restrict the damage which the proposed works might inflict upon any other interests, still, owing to the policy of haphazard individual development, injury has not infrequently been done to other interests, and not infrequently from a national standpoint the least economical development of the resources has eventuated.

Various remedial measures have been proposed from time to time in speeches, papers and reports of commissions, a selection of which are given in this section in order to show the drift of public opinion. Whilst

some are too vague in their terms, others are too costly or complex in function; some seem to favour the development of conservancy in separate sections rather than as an entity, and not a few utterly disregard the existing system of local administration and national idiosyncracies.

At a meeting of the Institute of Public Health at Exeter, in August, 1902, the Chairman—the Earl of Iddesleigh—is reported to have said: “If I were an absolute emperor, I should appoint a department of the Government to deal solely with water administration, which I should expect to prove beneficial to the community by the wise exercise of its discretionary powers, and to a greater degree by reason of the knowledge which it would slowly accumulate and place at the disposal of the country; one simply could not exaggerate the vital consequences of exact knowledge concerning water supplies either in respect of health or wealth.”

On December 4th, 1907, there was a proposal in the columns of the *London Standard* that “the Metropolitan Water Board in the interest, not only of London, but of the country, should call upon Parliament to deal at once with the whole question from a national point of view,” and in the next day’s issue of the paper Lord Avebury was reported as saying, “I was, and still am, strongly of the opinion that the question is one which should be considered from a national point of view.”

Turning to the papers before the various societies and institutions, Mr. J. Shaw¹ urged the formation of conservancy boards in 1877, and in the following year Mr. E. Easton² recommended the scientific regulation of

¹ *et seq.* See Appendix II.—Bibliography.

all water from the time it fell as rain until it reached the sea.

At the Sanitary Institute Congress at Stafford, in 1879, Dr. W. B. Richardson³ suggested the creation of a Ministry of Health charged with the administration of all water supply and sewage disposal works.

In 1881 Mr. W. H. Wheeler⁴ stated that £2,000,000 had been expended unsatisfactorily on the improvement of Fen rivers in consequence of divided jurisdiction.

Two years later Mr. C. E. de Rance⁵ suggested that riparian interests should be represented in Parliament by a responsible official of the Crown; that sites for the making of dumb wells, to divert the surface water so as to replenish the subsurface resources, should be selected by officers of the proposed central authority; that members of the county constabulary should take daily observations of the height of streams on certain selected county bridges, and that these levels should be checked by automatic recorders installed at important points.

In 1899 Mr. C. E. Jones⁶ pointed out the growing evil of the monopolisation of specific gathering grounds by large urban authorities and urged that the authorities in any area should be amalgamated and work under the control of a central authority, which latter body should include representatives of law, geology, hydraulic engineering, chemistry and meteorology, and should have the control of all streams, watersheds and sources of supply not already committed to the care of conservators, with power to allocate unappropriated gathering grounds; to divide and reallocate areas already appropriated, and to readjust the quantity of compensation water at present afforded; it should also have powers of entry and inspection, to direct prosecutions for pollution and to call

for reports, returns and analyses ; further, it should accord its sanction to all new schemes before they could proceed to obtain Parliamentary powers ; it should be an easily accessible court of appeal, capable of deciding all technical questions relating to water supply and should systematise all the customs and practices of existing authorities.

Dr. J. Tubb Thomas,⁷ in a report published in 1900, passes in review the development of opinion as to the depletion of underground water supplies, as represented in various legal decisions and by the insertion of clauses in private Bills, and suggests that county councils should be made the guardians of the water supply within their area, with power to purchase water in bulk from existing authorities and resell in bulk to lesser authorities, or to promote Bills for the construction of works to afford supplies to these lesser authorities ; also to hold inquiries where mining or tunnelling is likely to cause waste of water or injury to public or private sources of water supply, with a view to enforcing the employment of the best available means of preventing such waste.

On December 8th, 1900, the Water Board Committee of the Association of Water Engineers⁸ presented a report to that body, in which they stated that the control over undertakings for public water supply, being shared by four authorities—the two Houses of Parliament, the Local Government Board and the Board of Trade—was unnecessarily complex and unsatisfactory, and should be vested in a single body, the creation of which they recommended ; they also pointed out that as the boundaries of urban and rural sanitary authorities did not coincide with those of watersheds, such authorities were not best qualified to act as water authorities, other than as distributing authorities within their respective areas. They also stated that the law

relating to the protection of supplies against depletion and pollution required revision and amendment, and suggested the continuous supervision of all works of water supply, the collection and publication of official returns and a more general application of provisions to prevent waste.

At the Conference on Water Supplies and River Pollution, convened by the Sanitary Institute in October, 1901, Mr. A. Greenwood urged the desirability of publishing reports on the water supplies of each county, and Mr. H. W. Russell⁹ argued that the authority charged with the prevention of river pollution should have control not only of the main stream but also of the entire basin.

In 1902 Mr. H. T. Scoble¹⁰ advocated the establishment of water authorities charged with the supervision of all matters of water supply, sewage disposal, and refuse destruction.

About the same time Major Broadfoot, urging the influence of depletion on the value of fishings, suggested the formation of a central authority charged with the control of all questions of public health and water supply, and with the duty of tendering evidence to Parliamentary Committees on all questions dealing with the conservation of surface or subsurface waters.

In 1904 Mr. F. J. Bancroft¹¹ stated that the present system of control of public water supply undertakings was unsatisfactory and inadequate, that there was a great want of uniformity in the powers granted to various authorities and that it was high time that all the varied clauses introduced since the last general Act—the Waterworks Clauses Act of 1847—should be consolidated into one general Act; also that all public water supply undertakings should be subjected to an annual Government inspection.

At the same meeting Mr. R. E. Middleton¹² reviewed the question of administration and urged the creation of a central authority, with local authorities in each watershed, to collect and publish meteorological and hydrological data, enforce the laws framed for the prevention of the pollution of water and be responsible for the water supply and sanitation of the country.

At a meeting of the Sanitary Institute, at Cambridge, in the following year Dr. Sims Woodhead suggested the formation of a small expert committee, or water board, to supervise local committees representing the counties in the several basins, each charged with the administration of the water of its area.

In 1906 Mr. E. P. Hill,¹³ whilst doubting if a Government grant could be obtained for the purpose of measuring the yield of catchment areas, suggested that useful data might voluntarily be collected by the engineers of existing works and that each town receiving from Parliament a share of the national sources of water supply should be compelled to render an account of the trust which had been conferred upon it.

In 1907 Mr. U. A. Forbes¹⁴ criticised the haphazard manner in which water supplies were allocated to various authorities, and suggested the creation of a central authority to control this work, as alternatively a continuance of present procedure might lead to serious embarrassment and chaos in the future.

About the same time Mr. A. B. E. Blackburn¹⁵ stated that it would be unwise to alter the law as to underground water until data with regard thereto had been collected and suggested the creation of a central authority to obtain returns and data, and to inspect works and sources of supply.

In the following year Dr. H. R. Mill¹⁶ urged that

the control and distribution of the rainfall was of national rather than of parochial interest.

In the same year Mr. F. Rayner¹⁷ suggested that conservancy boards should include representatives of riparian owners, local authorities, trading and fishery interests; that these boards should be empowered to levy drainage rates and have the sole jurisdiction of the navigation and drainage of their own particular basins, subject only to the control of a central board, so as to ensure a uniformity of procedure throughout the whole country.

In a lecture before the London Institution, in 1908, Mr. C. Carus Wilson propounded the theory that underground water belonged to the community rather than to the individual and therefore restrictions should be imposed upon all who proposed to tap it.

The Author¹⁸ also touched upon the question in 1909 and 1910 urging the necessity of organising a survey and amplifying its official records with the compulsory returns of companies and local authorities, and with data collected by volunteer observers.

In the summer of last year Sir W. Ramsay¹⁹ reviewed the subject from the standpoint of sewage disposal and forcibly urged the necessity of at once introducing remedial legislation and formulating a scheme of action.

In 1902 a deputation comprising representatives of the County Councils Association, the Royal Sanitary Institute, the Association of Water Engineers and the Underground Water Preservation Association, waited upon the President of the Local Government Board, urging the expediency of protecting the water supplies of the country, and of amending and consolidating the existing law, so as to render private Bill legislation more

uniform than it is at present; five years later other deputations, organised by the British Science Guild and the Society of Chemical Industry, waited upon the same and also another Government department, urging the necessity of creating a central authority to deal with the whole question of water supply.

Questions have also been asked in the House of Commons by Mr. D. Maclean and others on several occasions during the past three years, with regard to the investigation and protection of sources of water supply and their control by a properly qualified central body, and on November 24th, 1910, the House of Commons made an Order for a Return as regards every water undertaking in England and Wales.

Various Royal Commissions have touched upon this question in their reports; that on Harbours in 1847 urged the necessity of the creation of some authority charged with the control of tidal rivers and harbours; that on London Water in 1869 recommended that on the introduction of any provincial Water Bill into Parliament attention should be drawn to the practicability of making the measure applicable to as extensive an area as possible; that on Salmon Fisheries in 1902 recommended the formation of watershed boards and a survey of the available sources of water supply; that on the Metropolitan Water Supply in 1903 reported that waterworks should furnish data of water levels, &c.; that on Sewage Disposal in its several reports during the past nine years has recommended the formation of rivers boards in the various drainage areas, and a supreme rivers authority, either as a separate authority or as a new department of the Local Government Board, to deal with all questions relating to rivers and their purification; to supervise the local rivers boards;

to act as a final court of appeal between the local rivers boards and aggrieved local authorities; to consolidate existing legislation on pollution; to continue the investigation of processes of sewage disposal; to collect information as to available sources of water supply and the local demand for the same; to control shell-fish layings and to conduct various inquiries as occasion might arise. The Viceregal Commission on Arterial Drainage in Ireland recommended, in 1907, the formation of a Government drainage department to define the boundaries of catchment basins, ascertain the nature, extent and cost of the drainage works required, determine the constitution of the body which shall be responsible for the maintenance of the works when executed, and appoint conservancy boards for the major catchment areas; also to exercise control over the drainage committees within their area, so as to secure harmony of action and unity of purpose. The Royal Commission on Canals, in 1909, recommended the formation of a central waterways board to control and co-ordinate certain existing canal routes and extend the system from time to time; and since this Paper has been written the Water Supply Committee of this Commission has urged the desirability of instituting a system of stream gauging,²⁰ and a Joint Committee of both Houses of Parliament, investigating the Water Supplies Protection Bill of the past Session, has suggested that an organisation should be created, empowered to inquire into the whole question of surface and underground water supplies from a comprehensive standpoint, to supervise the future allocation of supplies, and to serve as an authoritative adviser to Parliament in the consideration of particular schemes. They also suggest that there should be a Central Authority supervising and

controlling local representative boards, who should prosecute systematic and continuous inquiries into the water supply of their jurisdiction, take all necessary measures to husband their surface and subsurface supplies, secure the preservation of these from pollution, and advise on the allocation of water for sanitary, industrial and other purposes.

IV.—STATE INTEREST AND ADMINISTRATION.

In studying the problem of hydro-economics over a wide area it should not be overlooked that in each country or district some one problem appeals with more force than all the rest. Thus, for instance, in this country, where irrigation is not required and water power cannot be developed to any considerable extent, the density of the population renders the question of water supply and stream pollution of primary importance. In Italy, Switzerland, Norway and Canada, water power development is the predominant question; in India, Egypt, Victoria and the arid regions of the U.S.A., irrigation claims the first place; in the flat lowlands of Germany, or Belgium, inland navigation comes in for the greater share of official attention, and in low-lying Holland drainage and reclamation have the primary consideration; so also, on a smaller scale, whilst the predominant question in one river basin may be drainage, in another it may be navigation, water supply, or the prevention of stream pollution. The Author has therefore in the following pages touched upon all the varied branches of conservancy more for the purpose of illustrating the views of various States with regard to the ownership of water and their method of administering it than for any other, and because he believes that the

question can only be economically handled when all the interests are considered as an entity, in contradistinction to sectional administration by various independent authorities.

(A) *Rainfall.*

Quantitative meteorological observations were made by scattered observers at various times between the fourteenth and the nineteenth centuries, and meteorological societies were founded at Baden in 1780, in France and England in 1850, Austria in 1864, Italy in 1865, Scotland in 1874, Germany in 1883, and Japan in 1885. Stimulated by the advocacy of members of these bodies, various Governments have engaged in the collection and publication of meteorological records.

The first special appropriation of public money for the purpose of collecting meteorological data was the grant of £410 made by the Legislative Assembly of Pennsylvania in 1838 to the Franklin Institute. The British Meteorological Office was established as a department of the Board of Trade in 1854, and is now controlled by a committee appointed by the Treasury, and maintained by an annual grant of £15,500. Its work and records are considerably amplified by the publications of the Royal Meteorological Society, local scientific societies, and the splendid volunteer service organised by the late Mr. G. J. Symons in 1859, which now numbers 4,538 observers.²¹ Despite the enormous statistical output which all this organisation represents, more precise data is still required in several prospective reservoir areas and in other sparsely populated areas. During recent years, in order to arrive at a more equitable arrangement as to compensation water, it has been customary to make provision in the respective

authorising Acts for the appointment of arbitrators and for the establishment of a series of gauges on the site of the proposed works during the course of their construction, or for a definite term of years.

In Australia data previously collected by the State Weather Bureaux has been collected since 1st January, 1908, by the Commonwealth Meteorological Bureau of the Department of Home Affairs, under the Commonwealth Meteorology Act of 1906, which provides for the establishment of a central office co-operating with divisional bureaux in the several States, each of which in turn controls a series of nearly 5,000 observing stations.

In the United States of America, where the annual vote is about £300,000, various Federal and State services such as the Weather, Hydrographic, Agricultural and Reclamation Bureaux and Boards of Health co-operate with one another, and with volunteer services such as those established by the railways, some of which, such as the Southern Pacific Railroad, not only maintains rain gauges over their entire system but also keep a special staff to check and compile the returns for publication.

In addition to the publication of mere rainfall returns some Government departments such as those of the Transvaal, Austria, Egypt, the United States and Germany, and some semi-official departments such as those at Boston, U.S.A., and Venice, publish comparative returns of rainfall and runoff.

(B) *Drainage.*

Much drainage work has been undertaken at one time or another by various authorities, most of which, from 1120 A.D. when Richard de Rulos drained Deeping Fen to

the present day, has suffered too much from individualism; a comprehensive and uniform scheme for draining an extensive tract being greatly superior in point of economy, not only of land but also in capital cost and expenditure for maintenance, over a series of schemes for draining portions of the same area. An excellent illustration of this is afforded by comparing Westerdike's comprehensive scheme for draining Fenland with that planned and carried out by Vermuyden and his successors.

In the Netherlands, although much has been undertaken by private enterprise, the general care of the rivers and canals, the work of keeping the marshes drained and protected from the sea and reclaiming submerged land, has been undertaken by the Waterstaat, a special Government department which since 1877 has been under the charge of a special Minister; the local work of maintenance and administration being entrusted to the *dajli* committees of the Polder Boards, elected by the local landowners, and financed with funds, contributed in whole or in part by local landowners, the Province, or the State.

At the present time works authorised in 1908 are in progress for the reclamation of a tract of 48,000 acres of land from the Zuyder Zee, at a cost of £2,333,000 spread over a term of seven years.

Last year the Italian Government set aside £120,000 for preliminary work on the reclamation of the Pontine Marshes, which in the zenith of Roman rule was a fertile, healthy tract, embracing in its area of 1,190,000 acres no less than twenty-two populous cities, but which now, owing to long-continued neglect of its drains, canals, and streams, is unhealthy and sparsely populated. A reclamation scheme has been prepared by the Corps of

Civil Engineers and approved by the Technical Commission, working under the direction of the Minister of Public Works, and the expenditure, which is expected to reach £8,000,000, will be met in part by the Government and in part by landowners or associations of landowners.

In New Zealand the draining of the Hauraki Plains is being undertaken by the Government and from 15,000 to 20,000 acres of good land are already available for settlement in lots of from 150 to 200 acres.

In Victoria swamp or reclaimed lands comprise all areas so classed under the Lands Act of 1901 and such other lands as may be drained or reclaimed from time to time and so proclaimed in the Government Gazette.

The Governor-in-Council is empowered to cause any swamp-land to be drained and reclaimed by prison or other labour, and to authorise certain persons to enter upon any land for the purpose of surveying or of taking levels; the State has the right to appropriate such parts of any land required for drainage work, provided that full compensation is made to the owner or occupier under the Lands Compensation Act of 1890. These swamp-lands are divided into allotments not exceeding 160 acres, provisionally valued by a Land Classification Board and reassessed each 10 years; the land may be leased for a term of 21 years under a perpetual lease, or under a conditional purchase lease issued for a term of $31\frac{1}{2}$ years, or it may be sold by auction; but in any case the lessee or purchaser is under an obligation to keep open and maintain all ditches and drainage works on the land and adjacent to it and to make permanent improvements to the land of the value of ten shillings per acre in each of the first three years of his occupation unless the Minister is of

the opinion that such expenditure would not be advantageous nor profitable, in which case the condition is modified or omitted.

In Canada drainage works are under the direct control of the respective Provincial Governments, but as the water in the lakes, sloughs and marshes is the property of the Dominion Government some difficulty arose, previous to the amendment of the Irrigation Act in 1908, as no provision had then been made for the acquirement of a right to drain water from any source until all the provisions of the Irrigation Act had been complied with and a licence obtained. Under the amended Act the Minister of the Interior may, on the application of a provincial officer, approve drainage schemes authorised by provincial authorities upon filing a plan of the proposed works with the Commissioner of Irrigation, and upon the receipt of a report from that official that the said works will not injuriously affect any existing irrigation project or the future development of irrigation.

(c) *Flood Regulation.*

The natural facilities such as water supply, navigation and drainage which a stream affords, have induced more or less dense populations to establish themselves along its course, disregarding the contingency of floods, and not infrequently increasing their intensity by the construction of works, which have increased the runoff or reduced the discharging capacity of the stream; consequently the subject has received considerable prominence, and legislation for enforcing the maintenance of open channels has been enacted from the earliest times.

In Magna Charta, 1225 A.D., it was enacted that all

weirs should be put down on the Thames and Medway, and throughout all England except by the sea coast, and the clause was repeated without much apparent effect in several subsequent Acts, such as those of 1350 and 1371 and in numerous court leet and borough court rulings.

Commissions were from time to time appointed on the petitions of burgesses of various towns to prevent local riparian owners from diverting or obstructing the waters of local streams to the hurt of the boroughs situated upon their banks; three such commissions investigated, between 1378 and 1383, the alleged injury to the town of Nottingham, owing to the erection by Byron, Lord of Colwick, of weirs on the Trent; but little good resulted, since a process was issued against this same lord in 1392 for "diverting the course of the Trent so that no ships could come to Nottingham for a space of nine years."

Commissions of sewers were granted from very early times at the pleasure of the Crown, as occasion arose, and petitions were presented. Evidence of the customs and administration of Romney Marsh were taken by Sir H. de Bathe in 1258, and the code, drawn up by that judge, served for the guidance and government of all other commissions of sewers. This code provided for a general survey and admeasurement of the marsh and of the banks to be repaired, and laid down the mode of election by the commonalty of the twenty-four jurats who apportioned the duties and costs of each tenant, as well as of a bailiff who gave each tenant notice of his liability, and in case of default had the work done and levied double the cost thereof upon the defaulter's property.

Owing to heavy floods in various parts of the

country, and the consequent damage and loss occasioned thereby, more general commissions were issued under Acts passed in 1427, 1439, 1444, and 1472.

In 1531 a general Act was passed which, after reciting the form of oath and the qualifications of members, assigned to them a certain remuneration and empowered them to survey all streams, banks, bridges, mills, milldams, ponds, floodgates and impediments, to correct, repair and amend them, to inquire, by oaths of a jury, the location of such annoyances and by whose default, to punish the offenders, to assess those liable to contribute to the charges, and to appoint and pay all necessary officers.

Under this Act commissions were issued at the discretion and by the nomination of the Lord Chancellor, the Lord Treasurer and the Chief Justices, and the jurisdiction of the Commissioners was restricted to the specific area, county, or district specified in the grant creating the commission. Such a commission was issued for the whole county of Sussex on November 16th, 1534, to fifty-four persons, comprising a bishop, three lords, one abbot, five priors, ten knights and thirty-four gentlemen; and very interesting notes as to the committees which they formed to administer special districts, the visits which some of them paid to drainage works at home and abroad, the experts they called to their aid, the water courts which they held and the evidence which they collected, are to be found in the letters of one of these Commissioners to Lord Cromwell.²²

The course of administration did not always run smoothly, as an Abbot of Crowland answered a Commission of Sewers at Waynfleete in 1439 that they had of times repaired the banks for their own commodity but not at all for the advantage of the country. And

in 1620, according to Dugdale,²³ they could not legally collect funds, as they were only empowered to rate according to the improvement of the land, which could not of course be ascertained before the works were even commenced; consequently where landowners disputed the levies little or nothing could be done.

The Act of 1531 had enacted that each commission should last for three years, that of 1570 extended this period to ten years, but under the 1861 Act the temporary nature of the Commission was abolished, and the Commissioners were authorised to continue in office until superseded by the Crown. At the time of a Return to a Committee of the House of Lords in 1877 there were thirty-one commissions of sewers in existence under the Act of 1531, and twelve under the Drainage Act of 1861. The greater part of their functions has at various times been transferred to various corporate bodies, and commissions of sewers now generally control only the low-lying lands in the vicinity of the coast or at the estuaries of the large rivers. In 1864 the Inclosure Commissioners were entrusted with the control of streams, watercourses and pools, and were empowered under the Improvement of Lands Act of 1864 to advance loans for land drainage, irrigation and flood prevention, which powers were transferred to the Board of Agriculture in 1889.

More or less detailed investigations of flood areas, which have very materially advanced the science of hydraulics, have been undertaken by commissions appointed by the Papal States, the Italian States and Republics, and latterly by the Kingdom of Italy; in France by Louis XIV., XV., and XVI., the Emperor Napoleon III., and President Fallières; also by the Governments of Austria, Belgium, Germany, Switzerland, and some of the South American Republics; and

by the Federal Government and the Legislatures of the various States of the United States of America.

Flood regulation works have been installed on the head waters of the Msta and Volga by the Russian Government, and on the Mississippi by that of the U.S.A. The efficiency of such a scheme was most carefully investigated by officers of the French Government on the occasion of the Garonne floods in the latter half of the last century, but was not favourably reported upon; a few single reservoirs for flood protection, such as the Furens and the Gileppe dams installed by the French and Belgian Governments respectively in 1858 and 1875, have occasionally been undertaken.

In France the work of embanking against floods on small rivers is carried out by a free syndication, formed of neighbouring landowners desirous of protecting their property from inundation; where from want of unanimity a free syndication cannot be formed the work is undertaken by authorised syndicates, empowered to compel a minority of recalcitrant landowners to join a scheme projected for the common good.

In Prussia, Saxony and Bavaria riparian landowners and townships located on a tributary or secondary stream are permitted, on application to the authorities, to form a conservancy authority, empowered to construct and maintain all necessary works and to tax all landowners deriving benefit therefrom, but not to tax those whose land lies above the flood limits; on some occasions the State has assisted in the promotion of the scheme by granting pecuniary aid.

Flood warnings are issued by various Governments and the work is not infrequently undertaken by the meteorological offices of the various States.

Records of high-water levels of the Seine at Paris have been maintained since 1615, and Belgrand devised a system of predicting the height of floods at Paris by the observation of water stages at various points above Paris, which has been in continuous use since 1854.

In the U.S.A. daily records of river stages at Cincinnati have been maintained since 1858, and the continuous records for a few English rivers cover somewhat shorter periods.

(D) *Inland Navigation.*

There are in this country three classes of waterway: firstly, the large rivers which have been navigable from time immemorial; secondly, those made navigable by companies, boards, and individuals authorised to do so by grants from the Crown or by Act of Parliament. Of these the first was the magnificent scheme undertaken by Godfrey de Lucy, whilst Bishop of Winchester, between 1189 and 1204, who drained a large swamp close to his manor of Bishops Sutton, collected the water in a large reservoir, still known, though greatly diminished, as Alresford Pond and used the waters to render the Itchen navigable from Southampton to some point above Winchester; and the second, which is generally accorded the first place, was the grant to Thomas Sopwith in 1634, authorising him to widen and improve the Soar. Thirdly, canals have been constructed by companies and individuals under various private Acts passed at various times since 1539, when, if we neglect the Roman works in Fenland and the Beverley Beck constructed in the fourteenth century, the first English canal—the Exeter—was authorised. Five years later the city churches of Exeter presented 900 ounces of silver, parcel gilt, to the city fathers to enable them to improve the

watercourse of the Exe, but it was not until between 1563 and 1565 that John Trew completed the Exeter Canal. More than 200 years elapsed, however, before the passing of the first Bridgewater Canal Act in 1759, which properly inaugurated the era of British canal construction.

The first two classes of navigation are administered by a variety of conservancy authorities differing widely in title and power as indicated in Appendix I., Table 1; some of these are only interested in the maintenance of the tidal portion of the stream, as in the case of the Tyne Improvement Commissioners and the Tees Conservancy Board; others, such as the Humber Conservancy Board, are interested solely in the maintenance of the navigation, and have nothing to do with the repair of the banks. Some streams are under no control and others have a surfeit of controlling authorities; thus, the Severn having with its 17 tributaries an aggregate length of 628 miles and draining an area of 4,437 square miles, has a length of only 42 miles under the administration of the Severn Commissioners, and the Trent, having with its 10 tributaries an aggregate length of 460 miles and draining 3,543 square miles, has a length of only 73 miles under the jurisdiction of the Trent Navigation Company. On the other hand, the Nene with its two principal tributaries having a length of 164 miles and draining 1,077 square miles, has no less than eight public bodies controlling a length of only 31 miles.

Of the 4,128 miles of canal which have been constructed in England and Wales, 487 miles have been abandoned or converted into railways, 1,184 miles are now either owned or controlled by railway companies and the remainder are owned by canal companies, individuals and a public trust, all of which

are placed under the control of the Board of Trade by the Railways and Canal Traffic Act of 1888, but it has not exercised its powers to any great extent other than to collect and publish returns at infrequent intervals.

The State whilst not unduly favouring canals has promoted legislation in 1845, 1847, 1854 and subsequent years, which has strengthened their position as competitors with the railways and enlarged the scope of their own particular Acts under which they were severally governed previous to 1845. Quite recently the Royal Commission on Canals has recommended the formation of a Waterways Board of five Commissioners to obtain Parliamentary sanction for the purchase and combination of certain selected waterways, and to enlarge and administer the system as occasion may arise, a proposal which, if carried to a successful conclusion, will make an increased draught on the water resources of the areas in the vicinity of certain summit levels.

Canals were developed in Italy by the various State Governments from the twelfth to the fifteenth century, but with the decline of the fortunes of these States the numerous works of inland navigation and river improvement fell into a more or less neglected condition, in which they remained until taken in hand by the present Government.

In the Netherlands there are 265 canals with a total length of about 2,100 miles, of which about 5 per cent. are owned by the State and administered by the Minister of the Waterstaat, and the remainder, under the general supervision of his department, are administered by the Waterschappen, and by provinces, municipalities, and companies, holding concessions for a term of years. It is estimated that about £17,000,000 was expended on these waterways between 1862 and 1901.

In France a considerable amount of river improvement was done under Henri IV., and the Canal de Briare, connecting the Loire and the Seine, was commenced in 1604 and completed twenty years later at a cost of £1,300,000. In the reign of Louis XIV., Colbert, advised by Riquet, formulated a national scheme of roads and waterways which, excepting for the Languedoc Canal constructed about 1668 at a cost of £680,000, and a few other less notable works, was never carried out; in 1789 only 766 miles of canal had been constructed at a cost of £4,600,000, of which the two works mentioned above aggregated 284 miles. Most of these works had been constructed under concessions granted in perpetuity to concessionaries who had the right to levy dues upon the traffic, but during the 1789 Revolution this property was confiscated by the State. About 1820 the need for the systematisation of the existing network of waterways was appreciated, and steps were taken to expand and improve the system by means of loans specially raised by the State and by granting concessions to interested parties willing to finance certain schemes. In 1845 a law was passed authorising the purchase of concessions, and eight years later a large sum of money was allocated to indemnify concessionaires for the loss of their concessions.

In 1879 M. Freycinet, Minister of Public Works, introduced a programme to improve 2,500 miles of river and 2,250 miles of canal, and to construct 870 miles of canal at an estimated cost of £28,000,000, which it was intended to raise by means of loans. Five years later, however, part of the scheme was abandoned, mainly on account of financial difficulties, but not before 1,400 miles of canal and 700 miles of river had been improved. In 1903 M. Baudin introduced a supplementary pro-

gramme to carry on the work, with the modification that a moiety of the cost should be provided by the State out of current revenue, and the other moiety should be provided by various interested parties, such as chambers of commerce, &c. It was further proposed to create chambers of navigation, each empowered to control its respective network of canals under the general direction of the Minister of Public Works, to provide the funds for the maintenance of existing works and the construction of approved works, and recoup the expenditure by means of dues levied on the traffic according to an agreed schedule.

The length of inland waterways increased from 6,500 miles in 1847 to 8,550 in 1905, of which the navigable rivers, which are public property, aggregated lengths of 4,150 and 5,470 miles respectively in the years mentioned.

Between 1814 and 1900 no less than £91,987,310, was expended on the improvement, construction, and maintenance of French waterways, of which £35,154,786 and £26,448,451 were expended on the improvement and construction of the canals and rivers respectively, £12,330,293 and £18,053,780 being the corresponding expenditure on maintenance. These figures, however, do not include the cost of personnel, as the cost of maintaining the Department of Roads and Bridges is borne directly by the Government.

For purposes of administration the country is divided into a series of districts, each under the charge of a member of the Department of Roads and Bridges, who controls a competent staff and reports annually to the Minister of Public Works, summarising the work done in his district during the previous year, and submitting details and estimates of proposed works, which are generally submitted to a consultative and advisory

committee, known as the *Conséil Général des Ponts et Chaussées*, attached to the Ministry of Public Works.

In Belgium State works of navigation were engaged in as early as the thirteenth century, and carried on with dogged persistence despite the frequent setbacks, natural and political, such as the silting of the rivers and coasts, and treaties of the type of that of Munster, under which the country and its transport facilities laboured.

The inland navigation system, which is modelled on that of France, is under the direction of the Minister of Public Works. It had increased in length from 1,005 miles in 1820 to 1,345 miles in 1905; of this the State owns about 83 per cent., which is administered by a division of the Department of Roads and Bridges, 7·5 per cent. is owned by provinces, 4·5 per cent. by communes, and 5·0 per cent. by concessionaires for a limited period. In the former year the respective percentages owned by these several classes were 10, 64, 7, and 19, so that in the period under review, the provincial and concessionaire interests have been largely transferred to the State, mainly during the period from 1830 to 1860. The capital expenditure on construction between 1831 and 1905 is estimated at about £15,810,000, while in the same period the revenue has aggregated £5,238,442 and the cost of maintenance £4,958,321.

Not infrequently the State has assisted concessionaires by contributing from one-third to one-half the total cost of construction, according to circumstances, in consideration of the ultimate value of the works to the State; provinces and municipalities have also occasionally contributed lump sums for similar reasons.

In most of the German States the absolute ownership of the navigable streams is, as in France, vested in the Government, which undertakes the construction and

maintenance of the canals and the improvement and maintenance of the rivers.

The total mileage of waterways in the Empire is about 8,700 miles, of which about 5,700 miles are natural waterway and 3,000 miles are either canals or canalised rivers; more than one-third of this mileage is of minor importance, and the traffic is mainly conducted over a length of about 6,200 miles, of which approximately one-third is natural waterway.

About 60 per cent. of the system belongs to Prussia and is controlled by the Administration of Waterways, a special department of the Ministry of Public Works. The Minister acts through the Presidents of the rivers boards for the Elbe, Oder, Rhine, Weser, and Vistula, each presiding over a board, having its own legal and technical advisers, and directing from the respective offices in Magdeburg, Breslau, Coblenz, Hanover, and Dantzig, a series of suboffices, each charged with the administration of about 50 miles of waterway.

Previous to 1870 but little interest was taken in inland navigation, but in 1879 the Prussian Landtag sanctioned a uniform plan of river regulation, and about 3,750 miles of waterway have since been improved and constructed at a cost of about £26,500,000. In 1905 the Landtag sanctioned a further expenditure of £16,728,750 on new work, some of which is now in progress.

A few canals, such as the Teltow, have been constructed by communities to facilitate drainage or for other purposes ancillary to that of navigation.

In Austro-Hungary there were 5,450 miles of internal waterway in 1850, which had grown to 7,200 miles in 1887, of which 5,490 is natural waterway, 2,440 miles of which are in Austria and 3,050 miles in Hungary. It is estimated that the State expended £20,800,000

between 1848 and 1898, and £10,000,000 was voted in 1900 in connection with the further expansion and improvement of the system.

In Russia the rivers and canals are under departmental control. A considerable amount of work has been done at sundry times since the inauguration of the Empress Marie system in 1808, and last year the improvement of the internal waterways was one of the more important questions of public economy before the Duma.

One of the early kings of the House of Vasa, in the sixteenth century, projected a great scheme of internal navigation in Sweden, which practically included all the waterways which have since been constructed, but the traffic never approximated to the expectations of the founder, and during the last century steadily declined; in all probability it will revive under the scheme of enlargement of some of the main routes which the Government have in contemplation. In 1909 the Riksdag passed a Bill authorising the expenditure of £1,266,600 on the deepening of the Trollhättan Canal from Wenersborg to Gothenborg, conditionally on the authorities of the latter town agreeing to dredge the Göta river estuary at their own expense, and also that those of four towns on Lake Wener dredge their own harbours so as to admit vessels having a draught of about 13 feet.

In Canada the canals, which have been constructed to connect the various lakes with one another and with the St. Lawrence, affording a through system of internal navigation 2,200 miles long, from the Straits of Belle Isle to Port Arthur at the head of Lake Superior, are under the control of the Minister of Railways and Canals.

The first canal—the Coteau du Lac Canal—was

constructed in 1779, but although several canals were constructed at various times it was not until 1874 that a steady and uniform policy of expansion was engaged in. Up to 1908 £8,307,678 had been spent on construction, of which £4,221,742 was spent previous to the Confederation in 1867. In the same period £10,848,111 has been expended on enlargement, making the total constructive cost £19,155,789, and £4,987,698 has been expended on operation and maintenance. In the same period the revenue has aggregated £2,821,511, but this by no means measures the success of the system, since its value as a transport system has been considered of greater importance than its earning capacity. In April, 1903, the system was freed, causing the traffic to increase and the revenue to decrease as shown below:—

Year.	Revenue.	Freight carried in Tons.
	£	
1902	61,585	7,513,197
1904	16,305	8,256,236
1908	29,700	17,502,820

Excepting for a small amount of river improvement in four States by the Federal Government of the United States in 1827 it was not until about 1850 that the Federal Government purchased or took over the works of river improvement, which had previously been undertaken by States or companies, and it was not until about 1880 that the work was engaged in to any considerable extent. Between 1850 and 1907 the total Federal appropriations for river improvements, exclusive of harbour works, aggregated £51,000,000, and in the same period a further considerable sum has been expended by

counties, levee districts, municipalities, and companies. It is generally conceded that much more satisfactory results would have been attained if a comprehensive scheme in which local and central authorities could have co-operated had been engaged in from the first.

In the U.S.A. the Government exercises constitutional control over all navigable waters, the question of navigability resting solely with Congress ; when Congress makes provision to determine whether the physical conditions and commercial interests of any river warrant its improvement it immediately passes under the control of the War Office, and no work can be undertaken in or upon the stream without a permit from the Secretary of War, which permit is however revocable, and the work of river improvement is carried out under the charge of the Secretary of War by the Corps of Engineers. For purposes of administration the country is divided into districts, each of which is under the charge of an engineer officer, who, subject to the approval of the chief engineer, is empowered to make contracts and to carry out the work in his district. He is assisted by a permanent staff, and also occasionally by commissions appointed to make investigations or to consider prospects. The general law as to works on or in rivers is embodied in the Rivers and Harbours Act of March 3rd, 1899, which was extended to include canals by the Act of June 13th, 1902.

The first canal to be constructed was that from Boston to Concord, 27 miles long, completed in 1789, at a cost of £110,000 ; and, as in this country, this system of transport was at first enthusiastically developed and companies were encouraged and assisted in their work by the various State Legislatures, but with the development of railways the system fell into

decline. In 1880 it was estimated that there were 4,480 miles of canal in the country, representing a capital expenditure of about £16,500,000, of which 1,965 miles were at that time abandoned. In 1908 there were 4,500 miles of canal, of which 2,445 miles had been abandoned. Recently, owing to the reported inability of the railways to cope with the increasing traffic, the Deeper Waterways Committee has been formed, to investigate the possibilities of a resuscitated or expanded system of waterways.

(E) *Pollution.*

In 1388 the discharge of animal refuse into rivers was prohibited under a penalty of £20, and in 1472 a proclamation of Edward IV. enjoined the execution of divers statutes against the casting of filth, dung and noxious matter into the Thames and the rivers flowing by the cities, boroughs and towns of the realm. Offenders detected in or suspected of polluting the local streams were frequently admonished and fined at court leets, but the limited power of these courts rendered their protection of little avail, as the frequent reference to repeated and continuous pollution in their records testify.

The development of the factory system and the increase of population and industrial activity rendered many of the streams in urban areas little better than open sewers. In 1854 it was considered preferable to admit sewage to the nearest stream rather than to allow it to accumulate near dwellings. In 1857 the removal of suspended matter or the deodorisation of sewage before admission to a stream was recommended; in 1858 the pollution of rivers was legally prohibited,

and in 1861 it was enacted that all sewage must be purified and freed of putrescible matter previous to its discharge into a stream. The question of pollution was investigated by the Royal Commissions on the Pollution of Rivers in 1865 and in 1874, and as a result of their findings, the Rivers Pollution Prevention Act was passed in 1876, but it remained practically inoperative for twelve years until the passing of the Local Government Act, 1888, when county councils were authorised to act as sanitary authorities and to enforce the provisions of the 1876 Act with regard to streams passing through or by any part of their area. The Local Government Board were also empowered by the same Act to form joint committees of county and county borough councils for the purpose of enforcing the same Act, but only three such committees—the Ribble Joint Committee and the Mersey and Irwell Joint Committee, formed in 1891, and the West Riding of Yorkshire Rivers Board, formed in 1893—have availed themselves of this provision. These with the Thames and Lee Conservancy Boards are the only joint authorities in the country undertaking such work.

In their several reports since 1901 the Royal Commission on Sewage Disposal has steadily recommended the formation of river boards under a central authority to perform a variety of functions already outlined in Section 3, but, as these recommendations together with the whole question of pollution have already been very fully discussed in previous Papers read before this²⁴ and other institutions, the Author does not propose to deal further with the matter here.

In Germany although Acts 366 of the Criminal Code and 906 of the Civil Code are applicable to stream pollution, the introductory law of the latter code stands in the way of Imperial legislation, as it expressly

reserves to each State the power to frame its own water legislation; so long ago as 1894 a far-reaching Bill was introduced in the Prussian Diet but was shelved, as it was realised that without the co-operation of the other States it would be ineffective; however in 1899 the Reichstag accepted resolutions to appoint inter-State committees to look after streams flowing through two or more States, the work of which committees was afterwards transferred to the Imperial Council of Health, the nine committees of which report to the Imperial Board of Health, the maintenance of which board with a staff of 60 scientists and 35 clerks cost £35,000 in 1907.

The central authority is empowered to take over the management of the sewage of a whole watershed and to levy a rate on the district in order to provide funds for the carrying out of the scheme. Manufacturers are not allowed, under the Trade Regulations, to proceed with the construction of works on a stream until they have submitted plans to the central authority and satisfied it as to the nature and volume of the effluent which it is proposed to discharge into the stream.

In the United States the authorities are just beginning to recognise the evils of pollution, and although in some States a right of pollution contrary to the common law is recognised under the Mill Acts, designed to foster the development of industries, still in many States sewage schemes must now be designed so as to meet with the approval of the State boards of health.

(F) *Water Supply.*

From the earliest time springs were led into various towns by adventurers, under a grant from the king or the local authorities, or were presented to the community

by noblemen, burgesses, or priests. It was under such a grant from Henry III. that Sandford conveyed water from Tyburn into London in 1236; in 1240 Tiverton became possessed of the first municipal waterworks, which consisted of two simple leets, constructed at the expense of the Countess of Devon, and presented to the town by her ladyship.

In 1376, in response to the petition of the mayor and burgesses of Hull, Edward III. issued a commission to Michael de la Pole and others to investigate the possible sources of supply to that town, and it was proposed to tap Anlaby springs, but owing to the death of the king in 1377 and to the determined opposition of the rural population, the work was not proceeded with. In 1447, under a charter witnessed by John, Archbishop of Canterbury and Papal Legate, they were empowered to purchase, obtain or get wells wheresoever it should please them within the county or the town, a roving clause quite at variance with recent legislation; under this charter they purchased the Julian and Derringham springs at Anlaby and led them into the town through a large aqueduct. In 1543 the Common Council of the City of London were empowered under the first English Waterworks Act to amend the decayed conduits of the city, and to bring water into the city from springs at Hampstead, Marylebone, Muswell Hill, and divers places within five miles of the city. In 1606 the first Waterworks Company—the New River Company—Act was passed. And in 1623 the bellman of York publicly cried through the city that if any tenant gave water to any person both would be liable to forfeit twelve pence each, evidently in connection with water from the works which had been proposed by Maltby in 1616, the first restriction as to user. The earliest Act

authorising the purchase of a waterworks company's undertaking by a local authority was that of 1846, authorising the purchase of the Burnley Water Company's undertaking by the Burnley Improvement Commissioners, the predecessors of the present Corporation, and in the following year Acts were obtained authorising the purchase by the local authorities of Bolton, Liverpool and Manchester, of the undertakings supplying those places.

In 1847 the first general Act—the Waterworks Clauses Act—for waterworks was passed, followed by a second general Act in 1863, which two, with the Public Health Act of 1875, although containing divergent provisions as to general responsibility and management, are most commonly incorporated in private Acts. In 1864 the first Act was obtained authorising the formation of a joint board for the districts of Ashton and Stalybridge, and since then several joint boards have been formed, two of which, the Derwent Valley Water Board, formed in 1899, and the Metropolitan Water Board, formed in 1903, control very considerable areas.

In 1869 the Royal Commission on London Water reported that, when any district is supplied from a distant source, provision should be made to supply sundry places along the pipe line, and the Royal Commission on the Pollution of Rivers, in 1874, recommended that in any scheme for the utilisation of the pure water of a river basin for a town supply, the wants of all neighbouring villages and hamlets should be provided for as far as practicable. In 1879 a compulsory clause was inserted in the Act authorising the construction of the Thirlmere works for the supply of Manchester, under which supplies were to be afforded to local authorities within a certain distance of the aqueduct, and

under this clause an average supply of 331,000 gallons a day is afforded to eight local authorities. In the following year the Liverpool Corporation inserted a permissive clause in the Act authorising the Vyrnwy scheme, under which water is supplied by agreement to any place within twenty miles of the aqueduct; advantage has been taken of this clause by thirty-three authorities, with a population aggregating about 100,000. Similar clauses have been inserted in subsequent Acts; during the last Session of Parliament clauses were inserted in all the Water Bills of that Session in protection of agricultural interests. One of the objects of the Protection of Water Supplies Bill, which was investigated by a Joint Committee of both Houses of Parliament during the past Session, was to provide that where, by means of future works, water should be taken from any district for supply to communities outside that district, the district whence the water was taken and those through which it was conveyed, should be entitled to demand a share of such water for their own needs, upon terms to be agreed or fixed by the Local Government Board.

In the hope of affording supplies to small rural communities, the Royal Commission on Rivers Pollution recommended that owners of land should be permitted to include the cost of providing a village water supply amongst the expenditure on land improvement, which with the sanction of the Inclosure Commissioners (now the Board of Agriculture) could be charged to their estate, and doubtless a similar hope prompted those who framed the Public Health (Water) Act, 1878, to insert Section 5, which compels the owner of new houses to obtain from the local sanitary authority a certificate that the water supply is satisfactory.

Although many municipal authorities and companies keep excellent records there are, excepting for a Government return of the water supply in 944 urban districts in England and Wales prepared in 1879, no extensive reliable official statistics of water supply and only a few unofficial general returns,²⁵ but this will doubtless soon be remedied, at least so far as the present year is concerned, as on November 24th, 1910, the House of Commons made an Order for a Return, on the motion of Mr. H. Lewis, Parliamentary Secretary of the Local Government Board, showing as regards every water undertaking in England and Wales:—

- (A) The powers, if any, under which the undertakers are authorised to supply water ;
- (B) The limits within which the undertakers are authorised to supply water ;
- (C) The places actually supplied ;
- (D) The sources of supply, their nature and sufficiency ;
- (E) Particulars as to the works, the quantity and quality of the water supplied ;

and also as regards every district in England and Wales:—

- (A) The area and population of the district, and the number of houses therein ;
- (B) The number of houses supplied with water from a piped service ;
- (C) The names of the undertakers providing a supply of water ;
- (D) The source, nature and sufficiency of the supply where there is no piped service.

The following abstracts show with a fair degree of accuracy the wonderful increase in the consumption of water during a period of a little more than a century due to the expansion of trade, the increase in industrial activity, and the development of sanitation in urban and domestic life.

POPULATION AND WATER SUPPLY IN ENGLAND AND WALES.

Year.	Population per square mile.	Population in millions.				Annual supply of water in millions of gallons.
		Urban.	Rural.	Total.	Supplied with water by companies and local authorities.	
1801	153	4.17	4.72	8.89	0.8	1,460
1901	558	25.05	7.47	32.53	—	—
1909	613	—	—	35.76	29.0	263,913

INCREASES IN 108 YEARS IN TERMS OF THE LEAST AS UNITY.

Density of population	1 to 4.0
Population supplied with water	1 „ 36.2
Supply per head per day	1 „ 5.5

Appendix I., Table 2, shows that this increase is not peculiar to this country; further increases will have to be provided for from a steadily decreasing selection of available reservoir sites, unless of course the supplies are drawn from any source, more or less polluted, and treated by some sterilisation process such as ozonisation. The development of the law with regard to underground water having been so fully treated in recent Papers²⁶ before The Institution, it is unnecessary to dwell further upon the subject here.

The administration of water supply in the United Kingdom is extremely complex; in 1908 works of public water supply were administered by 659 individuals and private companies, 324 public water companies, and 1,248 local authorities. Those of the first-named category are subject to no Parliamentary control, whilst those in the other two classes are controlled by Provisional Orders of the Local Government Board, the Board of Trade, or by special Acts, in many of which general Acts are incorporated, the sections of which are inconsistent one with another. In many cases after the passing of an Act the conditions imposed are not strictly complied with, and in but few cases has Parliament any means of detecting or amending such defects or omissions until further powers are sought.

In several British overseas States the Governments have sunk numerous wells and constructed or purchased waterworks which are administered by the Minister of Public Works. In New South Wales the department of Water Conservancy regularly takes a series of well-level records. The Geological Survey of Western Australia has a special department devoted to water supply. In the Transvaal the Irrigation Department, under the Minister of Lands, reports on existing waterworks and proposals for new ones, advises farmers free of cost on questions of water supply and irrigation, criticises proposals for the establishment of townships submitted to the Townships Board, takes systematic records of stream flow, and undertakes well-boring and the design, construction and improvement of irrigation works.

In Tasmania it is provided that any number of municipalities, situated so as to be capable of taking advantage collectively of some common water system,

may, by petition to the Governor, be constituted a water district, managed by a joint council, consisting of such number of members from each constituent authority as the Governor may decide, and empowered to levy rates and raise loans for the purpose of constructing and maintaining the works.

In several German States the water supplies have been administered by the State authorities for several years past, and much work has been undertaken, as shown below ²⁷ :—

State.	Works instituted.		Number of communities supplied.	Population supplied in last year of the period.	Total population in millions in 1905.
	From	To			
G. D. of Baden ...	1856	1896	479	390,250	2·01
K. of Bavaria ...	1865	1898	1,488	415,213	6·52
K. of Württemberg...	1865	1896	700	863,177	2·30
P. of Alsace-Lorraine	1871	1897	492	—	1·81

Baden led the way in 1856 by appointing a commission of three specialists, increased to six in 1868, to attend to and advise on all questions of water supply. In 1865 Ehrmann was commissioned to advise local authorities in Württemberg on all questions of water supply, and in 1869 a department was created to carry on the work under his charge as expert adviser.

Prussia maintains the Royal Water Testing Institution, founded in 1901, for the investigation of water supply and drainage questions, which also conducts analyses of water for local authorities and private individuals according to a fixed scale of charges.

Under a series of regulations, as to filtration practice and the methods to be followed in making bacteriological investigations, issued by the Kaiserlichen Gesundheitsamt in 1892, but subsequently modified after a conference of certain officials and leading waterworks engineers, all German waterworks using surface waters have been compelled since 1894 to make daily examinations of the raw and filtered water, and to report in detail every three months to that body.

The Massachusetts State Board of Health publishes annual returns of water supply, the population supplied, records of well levels and stream flow, and experimental data on filtration, bacteriology, and other subjects of a cognate character.

(G) *Irrigation.*

In this branch of conservancy one finds the most comprehensive and precise schemes of administration developed and elaborated during many years of practice and dispute.

Although not now engaged in to any extent in this country it seemed at one time as though irrigation would be more widely practised. Water meadows were laid out in various southern counties between the seventeenth and eighteenth centuries, and various authors, such as Vaughan, Boswell, and Wright, contributed materially to the literature of the subject.

In Italy, which has the greatest artificially watered area in Europe—about 4·7 million acres—irrigation was practised before the time of Virgil. In Lombardy all the rivers were claimed by the State, and the Venetian authorities claimed not only the rivers but also the streams and standing pools. Water was rented to users

in definite amounts for specific periods, and landowners remote from a stream, wishing to irrigate their land, could upon authorisation cut a canal to the river through intervening property, upon paying for the value of the land and taking care not to bring the canal near to the house or garden of the estate traversed. The regeneration of Piedmont was wrought by the administrative work of Cavour half a century ago. Irrigation work is at present under the control of the Minister of Finance, who has in hand the construction of several considerable works, the most important of which is the Apulian aqueduct, 136 miles long, expected to be completed in 1921 at a cost of £5,000,000, of which the Government is providing about four-fifths, and various provinces and towns the remainder. These works will afford a supply of water to a population of about 3,000,000, will develop a considerable horse-power and irrigate an extensive area.

In India the first modern irrigation work was inaugurated in 1817, but it was not until 1867 that the Government took up the construction of irrigation works. In the first year of its administration £225,000 was expended, and, by way of comparison, the expenditure out of revenue in 1907-8 was £2,834,000. In the first ten years the annual expenditure amounted to £10,835,000; in the whole period from 1867 to 1901 the expenditure amounted to £71,617,000, and the Irrigation Commission, appointed by Lord Curzon in 1902 to determine the scope which exists for the further extension of State irrigation works, recommended the expenditure of £30,000,000 during the next twenty years. The outstanding debt in March, 1907, was £27,784,000, and the annual revenue had increased from £1,533,000 in 1895-6 to £3,448,000 in 1907-8.

The works are divided into three classes: (1) Productive works, the capital cost of which is wholly or mainly provided from loan funds. It is expected that the net revenue will cover all interest charges within a reasonable period after completion, but the expectation is not always realised, for out of a capital of £23,750,000 invested in 41 works of this class to the end of 1903-4, nearly £6,250,000 expended on 13 such works in three provinces had not then proved remunerative, but despite this, the yield on 28 others was sufficient to produce an average profit of about 7·5 per cent. on the whole of the above capital. (2) Protective works, the cost of construction of which is met from the famine grant. These works are not expected to prove directly remunerative, although some return a good profit. (3) Minor works, the expenditure on which is derived from current revenue.

The State is paramount landlord, renting both land and water to the agriculturists, and employing its own legal and engineering staff to design, construct, maintain and operate the works. For administrative purposes the work is directed by an Inspector-General of Irrigation, attached to the staff of the Governor-General, under whom are the heads of the irrigation departments in the public works department of each province, who are styled Secretaries of Irrigation to the Governors of their respective provinces. Each provincial department is divided into circles, subdivided into divisions, and still further divided into subdivisions, each under the respective charge of superintending, executive and assistant engineers. In the Bombay Presidency the question of undertaking a detailed and systematic survey of the underground water resources, as recommended by the Irrigation Commission, has recently engaged the attention of the authorities, as it has been recognised

that such data, if available, would not only reduce the number of well-sinking failures, but would also be invaluable to obviate water-logging when laying out new irrigation works in districts such as some of those in Sind.

Despite the high efficiency and considerable extent of this magnificent irrigation system, it was recently estimated by competent authorities that only 6 per cent. of the rainfall was utilised for cultivation and the remainder was wasted, 59 per cent. being lost in evaporation and percolation, and 35 per cent. going direct to the sea.

The practice of irrigation was carried to North America by its Spanish conquerors in the sixteenth century, and ruins of their ancient works, dating back to 1542, have been discovered at Coronado and elsewhere. It has also left the impress of its origin on the present-day procedure of some districts, such as in New Mexico, where a major-domo for each district is appointed in the spring by popular vote, who arbitrarily and without question distributes and assigns the water, and allocates the labour of improving and maintaining the system, for which he receives no salary nor any recompense other than that he is free from ditch work during his year of office.

Modern irrigation work in the U.S.A. dates from 1854, when work was commenced on the Duarte Ranch, South California. Major Powell reported to Congress in 1879, urging the development of the arid west by systematic irrigation, but thirty-three years elapsed before the work which he advocated was generally engaged in. In 1887 it was enacted by the "Wright" law that water should be the property of the community requiring its beneficial use, and that the work of its

administration should be vested in local popularly elected authorities, known as irrigation districts. These were given power to levy and enforce rates; to issue bonds guaranteed by the property of the district; to acquire, by purchase or condemnation, all land and water necessary for the construction, use, and maintenance of the works, and the right of entry on any land to make surveys, or to set out the lines of canals, and other works.

Colorado was the first State to provide for the supervision of its streams, but as the matter was not taken up until most of the water had been appropriated, the legislation was not so effective as if it had been promulgated earlier.

Wyoming embodied a clause in its constitution in 1890—Art. 8: The water of all natural streams, springs, and lakes, or collections of still water within the boundaries of the State are hereby declared to be the property of the State—and formulated a precise scheme for its administration; the supervision, appropriation, distribution and diversion of all the water of the State being vested in a Board of Control, of which the State engineer (appointed for six years but eligible for re-election) is president, the other four members of the board (each appointed for a term of four years, and also eligible for re-election), are known as superintendents of water divisions, the water divisions being subdivided into water districts, each in charge of water commissioners appointed for a term of two years. These latter advise ditch owners as to the volume of the water in the river above their area and the volume abstracted, and regulate the head-gates of the several ditches; when the supply begins to fail the ditches are closed in the inverse order to the priority of the claims or permits granted by the

Board of Control, so that he who first secured a permit to divert any water from a stream would in time of drought continue to receive that water until it altogether failed, whilst holders of permits of later date would long before that time have had their supply cut off by the Commissioner.

On June 17th, 1902, President Roosevelt signed the Reclamation Law under which the proceeds of the sale of public lands in thirteen Western States and three Territories were set aside to provide funds for the construction of irrigation works. The law is general in its terms, and leaves much to the discretion of the Secretary of the Interior; according to the law, the major portion of the fund collected in any State, must, so far as practicable, be expended in that State, but with a strange perversity the funds provided seem to be inversely proportional to the local needs, thus, whilst North Dakota, which has but few opportunities for irrigation owing to an inadequate water supply and a scarcity of land suitable for irrigation, contributes £1,101,600 to the fund, Nevada, which only contributes £20,700, has very considerable opportunities for development. The term "major portion" has therefore been construed as 51 per cent. of the total contribution in any particular State, leaving the balance available for expenditure in any other State, wherever it may be most desirable. The money is to be repaid to the fund by the letting or sale of the improved land to small owners, and thus will be available for further development and extension of the scheme. The funds increased from £3,075,000 in 1903 to £6,815,000 in 1906, and to £8,524,000 in 1908; over 100 projects were investigated, of which all but 28 were put on one side, and of these 25, entailing an estimated expenditure of £8,273,000, were engaged in. Work was commenced in September, 1903,

and the first to be completed was the Truckee Dam, in Nevada, opened in July, 1905. In April, 1909, 21 projects had so far reached completion that water was being supplied for the irrigation of 675,514 acres; £8,801,221 had then been expended on works, and the revenues then collected and available for re-expenditure amounted to £219,472. In March of last year the Senate passed a Bill authorising the issue of certificates of indebtedness to the extent of £6,000,000, in order to complete the various irrigation projects mentioned in President Taft's message.

These States and Territories of the arid region have a total area of 1,550,965 square miles, of which 868,000 square miles is vacant land, and 122,000 square miles is irrigable. Only 5,675 square miles were irrigated in 1890, mainly by private effort, but in the near future it is expected that the irrigated area will have increased to 8,200 square miles, mainly due to these works.

In the U.S.A. the leading authorities are of the opinion that the State should have perpetual ownership of the stream, and that the right to any water should be limited to one of use, restricted to the place and purpose originally specified; also that its supervision can only be efficiently performed by a tribunal thoroughly versed in the practice of water administration.

The Mexican Government has joined that of the U.S.A. to carry out a scheme, which is estimated to cost £1,500,000, to irrigate 180,000 acres, of which 23,000 are in Mexico, 47,000 in Texas, and 110,000 in New Mexico, the principal feature being a dam on the Rio Grande, 120 miles above El Paso. It is also granting concessions to companies to irrigate areas, and in some cases is offering a considerable bounty for each acre rendered cultivable by irrigation works.

In Egypt irrigation has been practised for over 6,000 years, and the Pharaonic system maintained a considerable population until about the end of the period of Roman occupation; thereafter it steadily declined until the latter part of the nineteenth century, when first French and later Anglo-Indian engineers were called in to improve it; since then very material progress has been made. Mougel's barrage, although it raised and diverted the waters of the Nile, did nothing to store the flood waters, but the system inaugurated with the Aswan Dam in 1895, aims at storing the surplus flood water and using it for the irrigation of extensive tracts.

The works are administered by a division of the Department of Public Works, presided over by two Inspectors-General of Irrigation, under whom are inspectors of irrigation in charge of circles, supervising chief and district engineers, and their subordinates.

In the Legislature of Victoria the Minister of Water Supply is charged with the administration of waterworks trusts, the construction of waterworks and irrigation systems and boring operations in search of water. The present minister, the Hon. G. Graham, who also holds the portfolio of Minister of Agriculture, is assisted in his work by an advisory and administrative commission of three, known as the State Rivers and Water Supply Commission, which, under the Act of 1905 constituting it and consolidating and amending the law with regard to water, takes over the property, powers and duties vested in and imposed upon the irrigation and water supply trusts, which, with the exception of the first Mildura Irrigation and Water Supply Trust, have been transferred to and vested in the Crown. The use, flow and control of all natural waters in the State is also subject to certain restrictions vested

in it; it makes and levies rates and charges for the supply of water, makes systematic surveys to ascertain the nature and extent of the water supply and water storage resources of the State, takes systematic gaugings of the streams, and volumetric determinations of the capacity of pools and lagoons; it investigates the effect of climatic conditions on the water resources, the means and cost of improving the resources and works for the distribution of the water, the extent, character, and quality of swamp-lands, and the cost of their drainage; prepares proposals for the construction of works and reports upon proposed works, instructs occupiers of land in irrigation practice, and records the extent and yield of land under irrigation. According to the latest report²⁸ the total extent of irrigated land in the State is 232,000 acres, exclusive of unauthorised diversions, which probably do not aggregate more than 40,000 acres. Irrigation is also practised on a small scale in other Australian States, and works are in progress or in contemplation which will very materially increase the irrigated area of the Commonwealth in the near future.

In Ceylon irrigation was seriously discussed in 1856, an Irrigation Department was established in 1900 under a Director of Irrigation, and 152,000 acres have since been irrigated, the expenditure in the first six years of State administration aggregating £333,000.

In South Africa irrigation is only just in its infancy and doubtless has a big future, as the Hon. J. H. Merriman said when inaugurating the proceedings of the first South African Irrigation Congress in May, 1909: "I regard irrigation as the most essential factor "in building up the future of the countries of the Union."

In Cape Colony the Government has established

irrigation colonies, and, by the loan of men and boring plant and by granting subsidies, has explored the shallow subsurface water resources of the country, and is now turning its attention to the deeper sources.

Natal, having an ample rainfall, has but little need for irrigation, but the Government has established two small irrigation settlements at Weenen and Winterton, which are administered by the Land Board of the State.

The Transvaal engaged in a hydrographic survey covering an area of 14,000 square miles in 1903, secured an expert irrigationist from India, and commenced its first large irrigation work at Mooi River in 1908.

Under Crown Colony administration the Irrigation Department existed as a separate unit under the Commissioner of Lands, but on the advent of responsible Government it passed to the control of the Minister of Lands. Towards the end of 1907 its accounts and records were amalgamated with those of the Lands Department. The Irrigation Department is directed by a chief engineer, under whom are senior officers, each in sole charge of a district, comprising about seven magisterial districts; the total expenditure on this department under the Budget, during the past three years ending 1908, is £171,035, of which £53,135 was expended on salaries, £9,764 on transport and travelling expenses, and the balance on borings, surveys, and apparatus for measuring and recording stream flow, rainfall, &c."

In 1905 Lord Milner appointed an Inter-Colonial Irrigation Commission, which recommended among other things the division of the two colonies, Transvaal and Orange River, into hydrographic districts, each under its own Irrigation Board, to deal with any works which might be constructed in the district, and water courts to

deal with all matters of dispute concerning water rights; they also dwelt on the importance of preserving for public use all sites naturally suitable for storage reservoirs and irrigation works. As one of the indirect results of their labours the Transvaal Irrigation Act was passed in 1908, which follows the general form of the Cape Irrigation Act of 1906, but differs from it in some essential details.

In Canada irrigation is being mainly undertaken by the railway companies, and it is estimated that in the near future 3,957,000 acres will be laid out for settlement in small holdings, mainly by the efforts of these companies. One quarter section of the Bow River project of the Canadian Pacific Railroad, comprising 1,650 miles of canal, irrigating 350,000 acres, has already been laid out.

The Canadian Irrigation Act, passed in 1894, enacts that the property in, and the right to the use of, all water in any streams within the district to which the Act applies, shall be deemed to be vested in the Crown, and that no person shall divert or use such water otherwise than in accordance with the provisions of the Act; further, each applicant for water rights is required to file a plan with the Commissioner of Irrigation and in the Department of the Interior, showing the source of supply, the point at which the water is to be diverted, the canals or ditches which are to be constructed, and the extent of the land it is proposed to irrigate; each authorised claim is plotted as sanctioned on a map at head-quarters, on which is also shown diversions of water for domestic and industrial purposes, irrigation bench marks and watershed divisions; topographical features are omitted in order to show the special features of the map with greater clearness, and limited editions are offered for sale to the public, separate

and more detailed watershed maps being kept up to date at Ottawa.

The Peruvian Government is unequivocally opposed to granting any water-power concessions which may in any way interfere with the development of the coastal irrigation area of about 2,500,000 acres, and for some years past it has steadily increased its Public Improvements Department with recruits from the United States Geological Survey and Reclamation Services, in order to deal with its hydrographic development.

Amongst other State activities in irrigation work may be mentioned the successful work of the French in Algeria and Indo-China, the survey of Mesopotamia by Sir W. Wilcocks for the Turkish Government, and the investigation of extensive irrigation schemes in the German Colonies of East and South-West Africa, and in Japan and the Argentine.

(H) *Water-Power.*

In this country water-power was at one time of considerable importance. Water mills and sites for mills are mentioned and valued in Domesday Book ; no less than 272 mills, ranging in value from 3*d.* to £1 3*s.* 6*d.* are thus recorded in Dorsetshire, and 298 mills are recorded in Hampshire. Frequent reference is made to the rent of mills in various monastic, manorial and borough records right to the end of the Middle Ages. With the development of mediæval industry, factories were located in the vicinity of waterfalls, the energy of which was used directly to drive the looms. Two hundred years ago every Sussex village had its fulling mill. At the close of the eighteenth century engineers of such eminence as Rennie, Jessop, and Smeaton were engaged in the design of water-mill equipment ; the latter

engineer designed no fewer than 44 mills for providing power for iron works and the production of powder, flour and oil, for sawing timber, drawing wire and pumping water. In 1785 Jessop reported on the possibility of providing a continuous supply of power to works in Sheffield, by impounding the flood waters of the surrounding streams and delivering an uniform flow to the head-race channels, and as recently as 1864 there were no less than 194 mills on the Rivelin, Loxley and Don in and above Sheffield.

About 1790 a change set in, and, with the successive developments in steam-power production and steam locomotion, trade was diverted from the waterway and the waterfall to the railway and the coalfield, and the neglected milldams and hammer ponds are all that remain to remind us of bygone industries. When the discharges and falls of streams have been more precisely investigated and fuel is more costly, water-power of small magnitude may be more generally developed and utilised for operating small lighting or pumping installations, but that day is doubtless very remote, especially in view of the developments in internal combustion motors and in the manufacture of producer-gas.

On the Continent and in some of the new countries where there is no coal, or it has not been exploited, the utilisation of water-power has been most carefully studied, and endeavours have been made from time to time, with more or less success, to transmit the power to places more or less remote from the power site by means of ropes and wires driven by turbines, by compressed air, and by water under pressure actuating secondary turbines. It was not however until long-distance electric transmission had been successfully accomplished in the first three of the pioneer attempts tabulated below that

hydraulic power became worthy of national interest and assumed that prominence in the national programmes which is now accorded to it.

Year.	Transmission Line.		Distance in Miles.	Voltage.	Efficiency of Transmission.
	From.	To.			
1882	Meisbach.	Munich.	34	2,700	0.32
1886	Criel.	Paris.	36	6,000	0.45
1894	Lauffen.	Frankfort.	109	25,000	0.72
1905	Yuba River.	San Jose.	184	60,000	0.74

In Switzerland under the law of 1869 all streams and watercourses are considered part of the public domain, the State maintaining a right of surveillance over all springs and head-waters in the interests of public health and safety; all works in or upon streams must be authorised by the Council of State. The regulations of the twenty-five Cantons with regard to water-power concessions were, however, so diverse that in 1892 the Federal Council investigated the advisability of placing the control of the water and water-powers under the Federal Government.

After two years' close investigation they found it inadvisable at that time to transfer the control, but recommended a standardisation of the cantonal laws, and suggested the compulsory mutualisation of all water-power interests along a stream, for the more advantageous development and utilisation of the power; also that the cantonal authorities should have the right to investigate any proposal for hydraulic-power developments, limit the period of any concession to a term of years, reserve to their own use, or that of any interested com-

mune, any power site which a promoter might propose to develop; they further recommended that the authority should be free of any obligation to indemnify any owner of a power plant, who might otherwise claim damages, by reason of any alteration of the regime of a stream for works of public convenience or necessity, and have power to revoke any concession in case of non-utilisation within a limited period.

In 1906 the Federal Council passed a resolution that all schemes of water diversion for power purposes were to be subjected to strict investigation and if sanctioned the concession was to be granted for a limited period not exceeding twenty years, subject, however, to renewal in certain cases; also the export of hydro-electric power was to be strictly forbidden, except in cases where Swiss interests would not be injuriously affected.

This resolution was doubtlessly framed with the intention of fostering local industries and preventing the promoters of hydro-electric schemes from making undue profits from national resources and at the same time giving the State an opportunity to obstruct any scheme for taking power which could be more advantageously used by the Federal railways, which during the past few years have been steadily acquiring power by agreement from the authorities of the Cantons of Tessin and Uri, and by agreements for the cession of the right of use of river waters by industrial concerns, such as the *Maschinenfabrik Oerliken*.

Two years later, by a popular vote of 304,923 for and 56,237 against, it was enacted that the Federal Congress should have the supervision of water-power developments, make provisions for the disposition of water-right concessions, and regulate the transmission and distribution of electrical energy "so far as may be

“ necessary to protect the public interest and provide for
“ the proper development of such resources. The Federal
“ Government should also regulate and dispose of con-
“ cessions for powers, located on intercantonal and inter-
“ national boundary streams, and regulate the taxes and
“ fees to be levied, after hearing the evidence of interested
“ cantons. It was further enacted that no hydraulic
“ power was to be exported without the consent of the
“ Federal Council.”

In Italy water was recognised as State property from the earliest times, and under the present administration all waters susceptible of serving any public interest are designated public waters, and are subject to the control of the Sovereign. In 1884 an Act was passed regulating the diversion of public waters, safeguarding other interests, and limiting the maximum duration of any water-power concession to a period of thirty years, but granting a renewal of the concession in favour of the first concessionaires for a second period of similar duration, unless, in the opinion of the administration, he had attained the purpose for which the concession was granted. The concession is granted at a fixed rental of 2s. 3½*d.* per horse-power per annum, subject to a rebate to allow for line losses, &c., which is directly proportional to the square of the distance of transmission, the rental may thus be reduced to a minimum of 4½*d.* per horse-power when the point of generation is more than 31 miles from the area of distribution.

It is also provided that the concessionaire shall not be entitled to any damages for any alteration in the regimen of the river, which may result from any work of public benefit undertaken or authorised by the Government during the period of the concession, but he may claim a proportionate reduction in rent or a

cancellation of the concession. From 1887 to 1897 over 1,000 concessions were granted for the development of about 124,000 horse-power, and from time to time administrative decrees were issued, each construing the law more and more favourably towards the State. In 1898 the Minister of Public Works issued a circular requiring all concessions for water-power then pending to be withheld, until such time as an official investigation of the possible value of water-power for Government purposes had been made; and in August of that year a commission was appointed to undertake this inquiry. Later a law was promulgated which provided for the supervision and regulation of all water-power concessions, with a view to the development of a national industry rather than to the production of an immediate increase in the national revenue. Under this law all applications for concessions must be investigated by a permanent commission, which determines whether there is any present or prospective State interest which interferes with the grant of the concession, and issues a decree, if they find it advisable, to utilise or reserve any water-power site which may be submitted to their consideration, at the same time rejecting any applications which in their opinion cannot co-exist with the Government project.

All concessions when granted are free of any obligation to defend the concession against contesting claims, whether or not such claims were made at the public hearing of the application for the concession, but the Government has the right to intervene in all cases where the concessionaire neglects or refuses to develop the power to the maximum extent; in such circumstances the concession may, however, be transferred to another party, who undertakes to make the necessary improvements.

On the nationalisation of the railways in 1906 it was urged that the continued use of foreign coal not only made a heavy drain on the national resources but constituted a source of weakness in time of war, as the whole transport system might be brought to a standstill for want of fuel, and that therefore it was imperative that the electrification of the system should immediately be undertaken ; accordingly all the available sites for hydro-electric installations were carefully investigated and mapped by State officials.

In France, as previously mentioned, the water of all navigable streams being considered as public property, in which the owners of adjoining property have no rights, the Government grants concessions revocable without indemnity to such applicants as it pleases. These concessions are classed, according to the output of the prospective plant, as authorised or under concession ; the former, granted for a maximum period of fifty years, comprise all those which develop not more than 266 horse-power, and the latter comprise all plants with an output in excess of this, with the further provision that those generating more than 19,995 horse-power will require the sanction of a special Act.

The concession is granted for a specified time, mentioned in the articles of concession, which also specify the location of the plant, the character of the works, the amount of water to be used, protective clauses with regard to other interests in the water, such as navigation, water supply, &c., the rental, the sureties for the fulfilment of obligations, the amount of power to be reserved for public services, the maximum charges for the sale of power to the public, the conditions under which the Government's right of redemption may be exercised, and the obligations of the concessionaire

during the continuance of and at the termination of the concession.

At the expiration of the concession the State is empowered to take immediate possession without compensation of any land, works, or right of way, appurtenant to the plant.

The ownership of the bed of an unnavigable stream is vested *ad medium filum* in the owner of the adjoining land, but no power can be developed without a permit from the Government, which is granted when he has indicated the location of the plant, outlined his proposals for using the power, proved that he possesses at least one-third of the total length of bank in the section for which the permit is asked, and satisfied the authorities that his developments will not interfere with larger developments for the public good; the permit is void if the work is not executed within three years from the date of the grant, and is revocable if the conditions specified in the grant are not complied with.

Works may also be established on private property by third parties, despite the objection of the owner, upon proof of public benefit and payment of an adequate compensation to the owner for the loss of his rights, but the plant and its appurtenances, as a corollary of the proof of public benefit, revert to the State.

In 1898 it was decided that all waterfalls in Sweden belonging to the State, representing about 20 per cent. of the total water-power of the country, should be surveyed and scheduled, but at that time no steps were taken for their exploitation. In 1902 an exhaustive preliminary report of the waterfalls was published. Early in 1906 the Riksdag authorised a grant of £275,000 for the purchase of such private waterfalls as might be necessary for the supply of power to

the State railways; extensive investigations were then conducted by Crown officials as to the practicability and economy of electrifying all the railways south of Bollnäs, comprising 1,230 miles of single line, 70 miles of double line, and 440 miles of sidings. In 1907, the investigations being sufficiently far advanced, it was reported that an annual saving of about £82,000 would be effected when the whole system was electrically operated; power works were installed at Trollhättan Falls and elsewhere, and the appointment of a commission was proposed, to be known as the Board of State Canals and Water-Power Installations, with offices at Stockholm, to represent the State in all questions of water rights and to manage the renting of State water falls. In 1908 the appropriation of £275,000 being exhausted, the Board of State Railways applied for a further vote of £385,150 for the purchase of additional water-powers, and the State now owns waterfalls of about 880,000 h.p.

The present law as to the right of disposal of waterfalls being considered obsolete and unsatisfactory, the Waterfalls Commission is preparing a draft for a more suitable law, and measures are about to be submitted to the Riksdag authorising a grant to be made for the purpose of undertaking a complete survey of the waterfalls; the results are to be published from time to time, in reports which will deal separately with each river, giving the length and boundaries of the streams, the ownership of water rights, details of the catchment area, important tributaries, falls, power installations, total available power at various water stages and the power already exploited.

In Norway the considerable sources of power available on the Glommen, Drammen, Aura and other rivers,

has not only developed the paper pulp industry, but has also attracted various foreign industrial firms to established themselves on these rivers. In 1906 the Störthing passed an Act forbidding the sale of water-power to foreigners, and only permitting them to lease it for a term of years, and further providing that no power exceeding 1,000 h.p. should be sold or leased without the consent of the Störthing. In 1908 a concession for a period of 70 years was granted to the Badische Anilin und Sodafabrik to regulate the Tyin and Matrefjord Falls and to develop from 60,000 to 70,000 h.p., the company proposing to spend about £550,000 on the regulation works and £2,200,000 on the whole installation and to pay an annual tax of about 1s. 1¼d. per horse-power to the State. In 1909 the Störthing passed an Act proclaiming that all waterfalls with a greater capacity than 1,000 h.p. which might be leased to a limited company should revert to the State, together with all its regulation works, at the expiration of the concession, which might be granted for not less than 60 and not more than 80 years. It might also be decreed that the power station, plant and equipment should also pass to the State with the regulation works; the State might also demand the removal of all auxiliary plant and works before a certain fixed date, or alternatively acquire them by valuation.

In 1907 the Bavarian Government passed a law to establish its claim to all natural sources of energy within its borders, and appointed a commission to survey and investigate all available sources of water-power in the country, to inquire carefully into all proposals for their development, and only to grant concessions to private individuals or companies where such concessions would not materially conflict with public interests.

In 1908 the Ministers of the Interior and of Transportation published reports based on these investigations, describing the principal water-powers on the public streams, and dealing with the utilisation of the power for the electrification of the State railways. During 1909 the railway authorities secured control of the Walchen-see and other power sites for the electrification of contiguous portions of the railway system.

The Government is also establishing central "over-land" stations to which existing power stations will connect; where, as in the Rhenish Palatinate, the power distribution is in the hands of companies, the Government drafts the essential features of the scheme and directs the construction of the works, so as to secure complete co-ordination and proper regard for public interests.

In the Dominion of Canada there is a large amount of water-power awaiting development, which is conservatively estimated at 25,000,000 h.p., of which only 487,000 was developed in 1909. In 1907 an Act was passed forbidding the export of power or fluid, the former being defined as electric power or energy produced in Canada, and the latter as petroleum, natural gas, water or other fluid, liquid or gaseous, produced in Canada and capable of being exported by means of pipe lines or similar contrivances. The Governor-in-Council is empowered to grant licences upon such conditions as he considers proper, and such licences may provide that the quantity of power exported shall be limited to the surplus, after the licensee has supplied for distribution to customers for use in Canada power or fluid to the extent defined by the licence, at prices and in accordance with the regulations prescribed; unlawful exportation of power or fluid renders the offender liable, for each day on which such exportation takes place, to a fine not

exceeding 5,000 dollars and not less than 1,000 dollars, and unlawfully laying pipes, &c., renders him liable to a similar penalty, together with forfeiture and destruction of the material.

In the U.S.A., although water-powers are mostly developed by private initiative, the State takes some interest in the work. The water-powers of the Mississippi were investigated and reported in the Tenth Census of the U.S.A. in 1880. In New York State a Water Supply Commission accords a public hearing to any company applying for powers to develop a water-power scheme, and reports to the State legislature on its feasibility and cost.

Last year the Government of New Zealand ratified an agreement with the Waihi Gold Mining Company, under which the company can take water to the extent of 10,000 h.p. for 42 years, without the option of renewing the lease, at 3s. per horse-power per annum, and will expend £150,000 on the installation. The Government can take over the installation at any time during the term of the licence at a valuation, and any local body within a certain distance has the right to be supplied by the company on agreed terms.

In the Budget for the present Session £300,000 has been put down for State water-power developments, a commencement being proposed with the Hutt and Lake Coleridge schemes.

Japan has also investigated its water-power resources, and all hydro-electric works, whether promoted or fostered by the Government or by private companies, are rigidly inspected both during and subsequent to their construction.

(J) *Fisheries.*

Inland fisheries were of considerable importance in the past. In feudal times a fishery was frequently as valuable as a mill; until Tudor times, it contributed a very considerable proportion of the national food, and might, even in this country, do so at the present time, if, as Professor Herdman²⁹ recently pointed out, this branch of conservancy were more energetically taken up.

Although one could hardly hope that pisciculture would be developed to such an extent as General Tcheng-ki-tang³⁰ recommended in 1889, still much could be done to improve fisheries by regulating the stream flow, by the removal of nets from the upper reaches of rivers, as on the Helmsdale, by extending the weekly close time of 36 hours, as on the Scotch Dee, by enforcements against drastic and unduly prolonged netting, and by more co-ordination between the various authorities interested in this and other branches of conservancy.

Inland fisheries have been the subject of frequent legislation between 1225 and the present time. At first streams were administered by commissions appointed by the Crown, later by conservators appointed by justices of the peace, and more recently by local conservancy boards, comprising nominees of county councils and other local authorities within the area of control, and representatives of the owners of land and fisheries, and licensed fishermen. In 1861 these authorities were under the control of the Home Office, which authority passed in 1886 to the Board of Trade, and in 1903 was again transferred to the Board of Agriculture. In 1817 an Act (57 Geo. III.) was passed to authorise the issue of Exchequer Bills, and the advance of loans out of the Consolidated Funds to a limited amount, for the carrying

on of public works and fisheries and the employment of the poor in Great Britain; clear evidence that the State then had the intention of fostering this branch of conservancy.

Salmon were first legislatively protected in 1285; in 1865 commissioners of salmon fisheries were appointed; in 1878 the appointment of boards of conservators for trout streams was authorised; in 1884 similar provisions were enacted for all streams except salmon streams; and in 1902 a Royal Commission on Salmon Fisheries was appointed, which recommended the formation of a central authority and rivers boards to control salmon fisheries and to prevent the pollution and injurious abstraction of water from rivers.

During the past thirty years thirty-two States in the United States of America have appointed State Fish Commissions, charged with the protection of fishery interests, such for instance as enforcing the construction and maintenance of suitable fishways in dams. The Federal Government appointed a similar commission under the charge of the Commissioner of Fish and Fisheries in 1871, as an independent branch of Government service. In 1903 it became the Bureau of Fisheries in the department of Commerce and Labour. This bureau supervises marine as well as inland fisheries, and with regard to the latter it stocks the streams and lakes with young fish, and maintains two marine biological stations and thirty-six fish cultural establishments.

The Government of the Dominion of Canada is stocking streams and lakes in Alberta and other provinces, and local associations are enthusiastically co-operating.

An inland Fishery Board, composed solely of keen

sportsmen and fishery experts, was established last year by the Newfoundland Government.

In Australia acclimatisation and other societies have done much good work in stocking streams, and latterly these have received support and assistance from the State Governments, and in one or two States Government hatcheries have recently been established.

The Government of the Dominion of New Zealand is also engaged in stocking its inland waters.

The German Imperial Government maintains a separate department of its Statistical Bureau to deal with its inland fisheries, and the institutes for pond culture show what can be done to increase the supply of food fish.

The Japanese Government established an Imperial Fishery Institute at Tokyo in 1889, and has steadily encouraged pisciculture, so that a large number of hatching grounds and fish ponds are now scattered all over the country, and, as in China, even the flooded rice fields are used for fish culture.

(K) *Hydrographical Survey Organisations.*

The history of systematic water investigations in the U.S.A. is intimately bound up with that of the geological survey, which was constituted by an Act of Congress in 1879. Under a resolution dated March 20th, 1880, the Director of the Survey was instructed by the Secretary of the Interior to make an investigation of the arid regions where agriculture was carried on by irrigation, to ascertain the practical advantage of water storage, the cost and storage capacity of proposed reservoirs, and the amount of water available for storage; he reported, but nothing came of it for some time. In 1888 however an Act was passed practically creating

an Irrigation Branch of the Survey, and authorising an appropriation of £20,500 for the purpose of surveying the arid lands, and investigating the extent to which that region could be redeemed by irrigation. Work was commenced at once, and at Christmas of that year an instruction camp of fourteen men was formed at Embudo, on the Rio Grande, in New Mexico. This lasted until April, when it was broken up and the men were sent to their various districts. In 1889 a further appropriation was voted to continue the work, but by a law passed in 1890 the appropriation was discontinued, and part of the 1888 Statute as to the withdrawal of public lands to be benefited by the proposed works from entry or settlement was repealed, owing to hostile interests in the Legislative Assembly. By a further Act it was provided in 1891 that reservoir sites were to be restricted to such land only as was actually necessary for the construction and maintenance of the works, excluding, as far as practicable, all land occupied by actual settlers at the time of the location of the said reservoirs. The opposition having somewhat subsided, the first specific appropriation of £2,562 was voted by the Act of 1894 for gauging streams and determining the water supply resources of the United States, including the investigation of underground currents and artesian wells in the arid and semi-arid regions. The annual grants for this special purpose have been as follows:—

	£
In 1895	2,562
„ 1896	6,150
From 1897 to 1900	10,250
„ 1901 „ 1902	20,500
„ 1903 „ 1906	41,000
In 1907	30,750

In 1891 the cost of the irrigation branch was £7,475 made up as follows:—

Services	£4,164
Travelling expenses	197
Field subsistence	594
Books, maps, instruments, rent, furniture, &c.	2,520

In 1902 the hydrographic grant of £20,500 was apportioned thus:—

Salaries	£7,175
Instruments	1,025
Surveys and gaugings	12,300

Streams are divided into three classes: those with permanent beds, those in which the bed changes only during extreme high or low water, and those with constantly shifting beds. Gauging stations, of which there were over 700 in 1906, are chosen where the channel is straight for some distance both above and below the site, and the banks are high and only liable, if at all, to overflow in times of high flood; the site is always removed as far as possible from the effects of tributary streams, dams, cross-currents and back-water, and wherever the channel conditions are satisfactory stations are located at railway or road bridges; at each station permanent marks are made on the bridge, or on a tagged line stretched across the stream, indicating where the measurements are made; the station is also provided with a gauge rod and a bench mark to which the datum of the gauge is referred; current meter observations are taken from bridges, from a light suspension cable stretched across the section, from a boat, or by wading—at intervals of from two to twenty

feet apart—and the discharge of the whole stream is taken as the sum of the mean velocity-area computations for each compartment of the cross-section. Some stations are to be maintained for twenty or thirty years or even longer as permanent stations for statistical and comparative purposes; others, known as secondary stations, are the subject of short period observations to determine the minimum or maximum flow for water-power or storage capacity determinations respectively, being correlated with some neighbouring permanent station. River profiles and the duration and magnitude of floods are also investigated.

The country is divided into districts, each under the administration of a resident hydrographer, who besides general administrative work makes a tour of his district, locating and installing new stations, inspecting as many established stations as possible, and making a discharge measurement at each station in order to check his assistant's work. The assistant hydrographers make a tour of certain stations, taking a series of regular discharge measurements in each, checking the gauge-height at the time of their visit, and noting any useful data. The district is in charge of a local observer who makes daily observations of the gauge-height at the station, reporting to the district office weekly or three-monthly on a special form, upon satisfactory inspection of which the district office remits a nominal fee to the observer, each report as received is carefully plotted on three curves—gauge-height-discharge, gauge-height-mean-velocity, and gauge-height-area—and where the points do not plot on the established curves the cause is investigated and corrected.

The permanent district staff is augmented by tem-

porary field aids, who are not infrequently college students over twenty years of age, who bind themselves to serve till the end of the field season, and receive a salary of from £4 to £20 10s. a month, together with subsistence and travelling expenses. There are in addition occasional special assistants—professors and engineers in practice—who are paid for some service and perform others voluntarily; material assistance is also rendered indirectly by officers of State, weather, geological, engineering, forest and agricultural services, by county, city, waterworks, railroad and canal engineers, and by officials of irrigation boards and river commissioners.

Several railways afford free transport for the officers of the survey and several private organisations have contributed to its funds; thus the California Water and Forest Association was formed in 1899 to co-operate with the United States division of hydrography and with other Government organisations for the conservation and protection of water supplies. This association of about 400 members raises funds by private subscription, and gave £820 to the survey in 1900. The Association of Canal Owners taking water from Kings River, and the Chambers of Commerce of Willow and Woodlands gave £328, £51, and £51 respectively to the survey in the same year.

The resident hydrographer computes the monthly and annual runoff at the several stations in his charge, and forwards this with other computed, observed and collected data to Washington. This information is published in two forms: first, a brief but uniform record of the year's stream measurements, issued as soon as possible after the close of the year as a hydrographic progress report in the series of Water Supply and Irrigation papers; and secondly, computations of the

discharge, the mean monthly flow, &c., amplified with special maps, and detailed reports on the hydrology of certain districts, and records of special investigations issued later in the Annual Report of the Director of the Survey, and separately in special Water Supply and Irrigation or other papers.

In Canada the N. W. Irrigation Act was passed in 1894, and the Dominion Surveyor-General was authorised to investigate the extent of territory adaptable to irrigation. The work was at first mainly confined to the inspection of proposed projects or those in course of construction, but afterwards it was placed under the charge of the Superintendent of Forestry, and still more recently a separate Hydrographic Survey has been organised, £2,050 being voted for its maintenance by Parliament in 1908; but, excepting for preliminary work and the purchase of instruments, little was done in that year as the season was too far advanced for much field work. A similar grant was made in 1909, and the irrigation tract was divided into three districts, with head-quarters at Calgary and branches at Maple Creek and Lethbridge. One hydrographer and an assistant have been allotted to each division, and equipped with a light wagon, gauging and surveying instruments; each party is expected to establish gauge stations in their respective area, and to arrange with local residents to take daily readings of the gauge rod, and report weekly to the Calgary head office; the work is at present confined to streams in the subhumid region of South Alberta and South-West Saskatchewan, but it is intended to extend the service as rapidly as possible so as eventually to cover the whole of the provinces of Alberta and Saskatchewan.

The Government also last year organised a permanent

Commission for the Conservation of Natural Resources, with head-quarters at Ottawa, composed of (A) the Dominion Ministers of Agriculture, the Interior and Inland Revenue, (B) a Minister charged with the administration of the natural resources of his province and nominated by each of the Provincial Legislatures, and (C) nineteen others—university professors, business men, &c.—nominated by the Governor-in-Council. The members of the Commission will receive no salary, but will be allowed travelling expenses, and will submit an annual printed report to Parliament.

The Commission has no executive or administrative powers, but is constituted solely for the purpose of collecting and digesting information of practical benefit to the country, also of advising Parliament on all questions of policy which may arise in reference to the actual administration of natural resources, where the question of their effective conservation and economical use is concerned; the first concern of the Commission is reported to be the making of an inventory of natural resources, included in which is inland water and water-power.

In Italy a special office called *Magistrato alle Acque* was constituted by an Act passed in 1907 to supervise the waters of the Venetian territory and a portion of Mantua in Lombardy, and to regulate them in the interests of hydraulic works, harbours and forestry.

An *Ufficio Idiografico* was formed at the same time, and two reports were published from the head-quarters at Venice in 1909. Five separate services were created to deal with meteorology, rainfall observation, hydro-metry, prevention of floods, and tidal observations. The meteorological observations within the area of adminis-

tration have been co-ordinated and systematised under the direction of the chief of the observatory at the Venetian Patriarchal Seminary, and to ensure accurate observations 290 rain-gauge stations have been selected, with an average distribution of 1 per 34·75 square miles; the hydrometric service will systematise past data, and maintain stations for the prevision and regulation of floods and for the maintenance of a statistical record.

Germany maintains three of the four hydrotechnical laboratories in Europe—at Berlin, Dresden, and Carlsruhe, where problems with regard to navigable rivers are investigated. The Hydrographical and Meteorological Bureau of the Grand Duchy of Baden issues reports³¹ at irregular intervals.

Other hydrographic reports are issued by the Victorian State Rivers and Water Supply Commission,²⁸ and the Transvaal³² and Cape Colony Irrigation Departments, by bureaux in France,³³ Austria,³⁴ and Switzerland,³⁵ and by the Egyptian Survey Office.³⁶

V.—SUGGESTED LINES OF ORGANISATION.

If a central authority is to be constituted to replace the multiplicity of controlling authorities, it is highly desirable that it should comprise within its jurisdiction all matters pertaining to water administration, and not merely those of certain sections, otherwise duplicate administrative machinery may be set up and funds may be expended without any corresponding economies being effected.

Such an authority should be subjected to the control of a Minister of Water Supply, and should have vested in it not only all the water-powers now exercised by various Government departments, but such others

as may be found necessary. It should primarily turn its attention to the replacement of the existing heterogeneous and inchoate administrative machinery by a uniform system of water boards, comprising representatives of local authorities, water supply, navigation, fishery and other interests, within the administrative area, co-ordinating and controlling all existing hydraulic works. These boards should be classified as main drainage or district boards, having the general supervision of main drainage areas, containing several river basins, and major and minor rivers boards in charge of particular basins, the minor basins being those in which, owing to small area or limited interests, there is little or no administrative work. The central authority's legal department should direct its attention to the co-ordination and amendment of existing legislation and submit suggestions to Parliament to that effect; its chemical department should continue the research work on chemical and bacteriological questions of the existing Royal Commission on Sewage Disposal, and assist local authorities on questions of filtration, sterilisation, and standards of purity of effluents. Its statistical department should engage in the preparation of comprehensive schemes for the collection of uniform and continuous data, and construct more or less complete records of the past from such scattered records as are available, such as Minutes of Evidence and Appendices to Reports of Royal Commissions, Memoirs of the Geological Survey, papers published in the Transactions and Proceedings of technical institutions and scientific associations, the reports of officials to local authorities, fishery and conservancy boards, water-works, navigation, and drainage authorities, &c. A short Act should be passed compelling all water supply and sewage disposal authorities to make annual returns

of their operations, so as to afford data as to domestic, trade and municipal consumption of water, the rate of filtration, statistics of waste prevention, and the cost of pumping and purification per thousand gallons, or other convenient unit. Its hydrographical survey department should systematically gauge streams and springs, make periodic and systematic observations of subsurface water levels, establish rain-gauge stations in upland areas not now adequately supplied with such gauges, and conduct investigations on a variety of hydrological questions of general interest.

The work of the regular officials each in charge of a specific area, and acting as expert adviser to the local board of that area, should be largely supplemented with data collected by engineers and medical officers to local authorities, and other volunteer assistants such as the officials of canal and navigation companies, fishery, conservancy and drainage boards, village school-masters, owners of private wells and pumping plant; and these latter should gladly co-operate, since the publication of their records in the official return, checked from time to time by the district surveyors, might prove valuable evidence in an arbitration case, lawsuit, or inquiry by a Parliamentary Committee.

The central authority should publish an annual report, which for general convenience should be issued in a series of pamphlets, each dealing with some section of the authority's activity; and in addition an annual summary of foreign progress and practice should be published with the report.

If Parliament in its wisdom does not hearken with more speed to the recommendations of the most recent Royal Commission, which has suggested the creation of a central authority, than it has done to similar recom-

mendations of earlier commissions, then it is highly desirable that the hydrographic survey should be inaugurated forthwith, as recommended by the Select Committee of both Houses on last Session's Water Supplies Protection Bill, and the suggestion as to compulsory returns should also be enacted. Data will thus be steadily accumulated, and will be available for the use and guidance of all who are engaged in the planning, construction and administration of hydraulic works, and will also serve for the guidance of Parliament when it does take in hand the creation of the central authority. The expenditure would not be excessive, and could doubtless be met at first by a grant under the Development Act, which provides for grants for the reclamation and drainage of land, the improvement of fisheries, and for any other purpose to promote the economic development of the United Kingdom.

CONCLUSION.

In conclusion, the Author must apologise on the one hand for the length of the Paper, and on the other for the omission of much interesting and appropriate data owing to the exigencies of keeping the Paper within moderate limits, but he trusts that between the conflicting claims of much data and little space he has adequately contrasted the inchoate character of British water administration with the definitive policy of many colonial and foreign states.

APPENDIX I.

TABLE 1.—Authorities having control of various navigable rivers in England and Wales.

TABLE 2.—The increase in the population and the water supply in various towns.

TABLE 3.—Statistics of various countries.

TABLE I.

Showing authorities having control of various navigable rivers in England and Wales :—

1. Banks Commissioners.
2. Canal Company.
3. Commissioners of Sewers.
4. Conservators.
5. Conservancy Board.
6. Conservancy Commissioners.
7. Dock and Harbour Board.
8. Drainage Commissioners.
9. Drainage and Navigation Commissioners.
10. Drainage and Navigation Improvement Commissioners.
11. Drainage Corporation.
12. Drainage Trustees.
13. Haling Ways Commissioners.
14. Harbour Commissioners.
15. Harbour and Dock Commissioners.
16. Municipal Corporation.
17. Navigation Company.
18. Navigation Commissioners.
19. Navigation Trustees.
20. Outfall Commissioners.
21. Private Individuals and their Trustees.
22. Port Commissioners.
23. Port and Harbour Commissioners.
24. Port and Haven Commissioners.
25. Railway Company.
26. River Commissioners.
27. River Improvement Commissioners.
28. Sluice Commissioners.
29. Sluice Company.

TABLE 2.

Showing the Increase in the Population of various Towns,
and in the Annual Consumption of Water in various
periods ranging from 108 to 11 years.

Country.	Town or City.	Year.	Population supplied in Thousands.	Annual Supply in Millions of Gallons.	Supply in Gallons per Head per Day.	Period of Years.	Increase in Terms of the least as unity in the	
							Popula- tion.	Annual Supply.
England	Birmingham	1893	567.4	5,332.8	25.75			
	"	1907	800.2	7,810.0	26.74	14	1.41	1.46
	Bradford	1871		2,920.0				
	"	1908	460.0	4,745.0	28.26	37		1.62
	Brighton	1897	165.0	2,142.5	35.57			
	"	1908	180.0	2,335.0	35.54	11	1.09	1.09
	Derby	1853	18.8	166.0	24.14			
	"	1908	127.8	1,146.6	24.58	55	6.79	6.91
	Hartlepool	1875	44.0	554.0	34.49			
	"	1904	92.5	1,359.0	40.25	29	2.10	2.45
	Hull	1893	196.0	3,110.7	43.48			
	"	1908	285.2	3,846.2	37.65	15	1.45	1.24
	Ipswich	1891	51.8	426.8	22.57			
	"	1907	73.4	544.3	20.32	16	1.42	1.28
	Leicester	1878	100.2	1,012.1	27.68			
	"	1906	270.5	1,582.5	16.03	28	2.70	1.56
	Liverpool	1800	77.5	36.5	1.30			
	"	1851	420.1	1,648.5	10.75	51	5.42	45.16
	"	1908	910.0	11,688.4	34.00	108	11.74	320.23
	London	1820	970.0	8,589.5	24.36			
	"	1850	2,174.0	16,753.5	21.11	30	2.24	1.95
	"	1908	7,046.8	81,823.9	31.94	88	7.26	9.53
	Manchester	1832	87.2	442.5	13.89			
	"	1908	1,250.0	14,615.2	32.03	76	14.33	33.03
	Nottingham	1881	181.0	1,247.9	18.89			
	"	1907	340.0	2,744.9	22.10	26	1.88	2.20
	Reading	1897	76.4	1,049.8	37.63			
	"	1908	81.0	1,337.9	45.25	11	1.06	1.27
	Sheffield	1871	239.9	2,037.5	23.27			
	"	1908	488.5	3,945.5	22.12	37	2.04	1.94
				5,131.1*				2.52
	Southampton	1852	11.0	63.3	15.79			
	"	1897	76.4	1,049.8	37.63			
	"	1908	81.0	1,140.8	38.59	56	7.38	18.03
Scotland	Dundee	1894		1,839.1				
	"	1908	202.0	3,989.8	54.11	14		2.17
	Edinburgh	1871	254.0	2,213.2	23.87			
	"	1905	448.5	6,302.5	38.50	34	1.77	2.85
	Glasgow	1861	436.9	6,666.7	41.78			
Germany	"	1908	1,117.2	23,978.7	58.80	47	2.56	3.60
	Berlin	1883	1,190.0	4,676.7	10.80			
France	"	1899	1,800.0	11,223.7	17.08	16	1.51	2.40
	Paris	1808	550.0	641.3	3.20			
Australia	"	1906	2,760.0	58,245.3	57.70	98	5.02	9.09
	Melbourne	1857	95.4	1,186.2	34.70			
	"	1908	527.0	12,307.2	63.81	51	5.52	10.37
U.S.A.	Sydney	1892	378.9	4,427.1				
	"	1910	642.0	9,486.9		18	1.69	2.14
	New York	1850	510.0	12,161.8	65.33			
	"	1890	1,510.0	44,104.0	80.02	40	2.96	3.63
	"	1908	4,500.0†	205,312.5	125.00	58	8.82	16.88

* Including supplies in bulk to other authorities.

† Greater New York includes a much greater area than that of 1890.

TABLE 3.

Showing Statistics of various Countries with regard to Population,
Waterways and Water Power.

COUNTRY.	Area in Thousands of Square Miles.			Population.		Length in Thousands of Miles.					Available Water Power in Millions of H.P.
	Total.	Forest.	Irrigated.	Total in Millions.	Per Square Mile.	Roads.	Railways.	Canal.	Navigable River.	Coast Line.	
England and Wales	58.8	2.9	—	35.7	613	126.6	15.9	3.6	0.8	2.4	—
United Kingdom ..	121.4	4.8	—	45.0	363	—	23.2	4.7	1.1	—	0.9
Austria-Hungary ..	242.3	72.6	—	49.3	189	81.0	23.7	1.7	6.5	1.1	6.5
Belgium	11.4	2.0	—	7.2	636	5.9	2.9	1.2	0.5	0.5	—
Denmark	14.8	1.2	—	2.5	169	4.2	2.0	—	0.1	—	—
France	203.7	34.7	0.62	39.2	190	23.8	27.0	3.1	5.4	2.4	9.0
Germany	208.7	54.0	—	60.6	290	265.0	34.8	2.1	4.2	1.5	4.0
Greece	25.0	—	—	2.6	105	2.9	0.7	—	—	1.1	—
Italy	110.6	15.9	7.33	33.6	304	51.0	10.1	2.2	0.6	3.9	8.0
Netherlands ..	12.6	1.0	—	5.7	448	2.9	1.8	2.1	0.9	0.9	—
Norway	124.2	26.3	—	2.3	19	14.8	1.5	—	0.1	12.0	6.0
Portugal	34.6	—	—	5.4	153	2.0	1.5	0.5	1.0	0.5	—
Russia	1,997.0	664.9	—	160.1	81	65.0	38.7	0.9	33.0	—	3.0
Spain	190.2	—	4.37	19.1	98	14.0	8.5	0.1	1.0	1.8	—
Sweden	172.9	32.4	—	5.3	31	36.2	8.0	0.1	0.6	2.3	5.0
Switzerland ..	15.9	3.4	—	3.5	217	—	2.5	—	—	—	3.0
United States ..	2,970.0	900.0	8.27	83.9	28	—	222.6	2.2	27.4	8.6	37.0
Canada	3,745.6	1,240.0	6.08*	6.0	1.6	—	23.0	0.1	3.0	—	25.0
Australia	2,974.6	151.6	0.46	4.3	1.5	136.0	16.2	—	0.2	12.2	—
New Zealand ..	104.7	26.7	—	1.0	9	5.0	2.5	—	—	—	—
India	1,766.6	107.1	71.29	287.3	163	—	30.6	—	—	—	—
Egypt	1,500.0	—	9.4	16.0	11	1.1	3.9	—	—	—	—

* Prospective, only a very inconsiderable portion of this is yet taken in hand.

† Not estimated.

APPENDIX II.

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DISCUSSION.

Sir ALEXANDER STENNING (Past-President) said he had great pleasure in proposing a hearty vote of thanks to Mr. Baldwin-Wiseman for his excellent Paper. The writer had apologised for its length, but although it was too long to be read in its entirety he considered that as abridged it had been almost too short. He personally had had the advantage of reading the Paper through at leisure, and when the Members had enjoyed the like opportunity he thought they would agree with him that it afforded a wonderful amount of information on the whole subject of water and water supply. It was both historical and practical, and showed how thoroughly conversant Mr. Wiseman was with the subject he treated. The Paper would be a valuable addition to the records of The Institution, and must in future become a book of reference for all matters affecting water supply and drainage.

They had all, from time to time, noticed a falling off of water supply from various causes. He (the speaker) had had occasion to notice it in Surrey, where he was told that fields which were now good pasture fields were formerly flooded by water coming off the hills. He had occasion, a few years back, to visit a particular field within twenty miles of London which he had known as a child; formerly it was pasture land with a fairly large stream running through it, but now the stream was almost dry. He had not been able definitely to find out what was the cause, but he could only account for it by the fact that a large amount of water must have been drawn off by the pumping, which went on within a certain distance of London.

The various bournes that rose at a stated number of years—sometimes every five years and sometimes at longer intervals—would be familiar to many present. One in Surrey, which ran into the River Wandle, rose at Morden Park and flowed along the valley. One could see the water bubbling up all along the valley, and at times it flooded a certain number of acres of land. A field in that valley was for sale, and the auctioneer described it as an enclosure having so many hundred feet of frontage—"a beautiful grass field." A gentleman in the auction room was so struck with the auctioneer's graphic description that he became the purchaser, and having paid his money he departed to view the land; instead, however, of finding the grass field described he found instead a pond of water, the bourne having risen and flooded the land.

Another bourne with which he was conversant rose periodically and flowed into the Cray Valley. He mentioned those two bournes, because they had been brought before his personal knowledge for years. Along one particular road between Orpington and Knockholt were some deep depressions which usually one might see covered with grass, though occasionally in passing people might notice water just coming into the bottom, and as time went on they were actually filled up with water to a depth of 15 or 16 feet and overflowed into the Cray River. It was a wonderful sight, and perhaps Mr. Baldwin-Wiseman could tell them where the water came from. He had not been able to get any satisfactory reason for it, but the supposition was that it rose from some underground reservoir that was overcharged and must overflow somewhere. During the past autumn he had had to visit the Elham Valley. One of these bournes was running very strongly; he had never seen it flowing so

fiercely, and although on previous occasions he had been able to drive through it, this year it was impossible.

These bournes in former times were frequently met with, but of late years they were becoming rare, and he thought that must be due to the pumping that went on at various waterworks all round, which not only reduced the surface water but also the underground supply.

Some system of control would soon be essential, and he personally considered that Mr. Baldwin-Wiseman's suggestion that some State department should undertake the whole management and supervision of our water supply was a valuable one. Wherever they went they found small water companies pumping, and county councils going into adjoining districts to obtain their water supply. That could not go on for ever, and it was important, therefore, that every advantage should be taken and every power exercised to protect our water supplies, and to see that they were properly administered.

In the case of London, as they knew, the Water Board was now applying to Parliament to provide large storage reservoirs throughout the country, and they said—he hoped they were correct—that water coming from the Thames, although polluted up above, became good drinking water when it was properly treated.

If they read Mr. Baldwin-Wiseman's Paper in detail they would find all those points touched upon in a very able and masterly manner. He had dealt with so many points that it was impossible to advert to them all, and he personally did not feel competent to do so.

He had hoped on the present occasion they would have had some of their members present who made a particular study of the water question, but those gentlemen would have the opportunity of discussing

this Paper later in the session, when Messrs. H. F. Bidder and W. Vaux Graham read their Paper entitled "Recent Developments in Parliament in connection with the Law and Practice *re* Water Rights," as it was proposed that the discussion on Mr. Wiseman's Paper should be continued with the discussion on Messrs. Bidder and Graham's Paper. He hoped that all those who were interested in the great question of water supply would come and help them with their advice.

He did not know that he could add anything more, but he was sure they would all agree with him that a very hearty vote of thanks was due to their friend for so excellent a Paper. It must have taken him a great deal of time to study the whole question as he had done, and the record, when printed and published, would be a book of reference which he was sure many would be glad to have upon their shelves.

Mr. HERBERT T. SCOBLE (Professional Associate) said he rose with much pleasure to second the vote of thanks to Mr. Baldwin-Wiseman for his most useful Paper. The chief difficulty in this country compared with foreign countries, as the author had mentioned, was the fact that in England there was private ownership in water, and therefore there were many conflicting interests which in other countries never arose. The whole of the streams, in many cases from their very sources to their destination, were under a large number of different interests, such as fisheries, power, and also water supply for mills, &c. There was no one to look after those interests, but any one aggrieved had a right at law to bring an action against the person infringing his rights. That was a very expensive process, and the result

uncertain, and people preferred to suffer the evils they had rather than go to law to remedy them.

The Local Government Act of 1888 had been referred to on the present occasion, and undoubtedly it was true that many county councils had adopted the powers given by that Act, but unfortunately they were permissive rather than obligatory. The councils as a rule had to deal with a stream already polluted to a large extent, and they could not compel a manufacturer to make his effluent purer than the main body of the water. Manufacturers said the stream was in bad condition when they got it, and asked: "Why should you worry us to reduce our effluents to such a fine figure as you suggest? It is not practicable."

There were one or two further points to which he would refer. Under Division III. of the Paper, page 179, it was shown that many piecemeal concessions had been made from time to time; that seemed to be our policy, to let each particular applicant go for what he could and disregard the wants of other communities, rather than to take a comprehensive view of the whole subject.

In dealing with the proposal that all water supply and sewage disposal authorities should make annual returns, it would be advisable to add that those returns should be on a uniform basis. At present there were five rivers boards, and they did not insist on a uniform standard for the purification of manufacturers' effluents and for the discharges of sewage disposal works, consequently there was considerable difficulty in estimating the amount of purification effected by one water board compared with what was obtained from another. If they were to have those statistics for the whole of the kingdom, as he hoped in time they would,

it was desirable that they should be comparable straight away rather than that they should be subject to intricate calculations—that was important. He hoped the same amount of purification would not be insisted on at the head waters which were pure and at the lower reaches where the stream was more and more polluted. There seemed to be an idea that one uniform standard should be made for the whole of the kingdom. That did not appear to him to be at all a practical measure.

The chief thing they had to bear in mind in connection with this matter was that it was to no one's interest at present in the political world to move for any of those reforms, and until public opinion was better informed by societies such as The Surveyors' Institution and others who were alive to the necessity of the question, there would be nothing further done.

He desired to second the vote of thanks to Mr. Baldwin-Wiseman.

MR. R. W. HARPER (Associate) said he desired to join with the mover and seconder in the vote of thanks to Mr. Baldwin-Wiseman for the interesting document he had read to them, for the vast amount of information which it imparted, and for the trouble he must have taken to secure it and to put it together in the form he had done. He was sure they would look forward with considerable interest to the discussion when it came on in conjunction with the Papers that had been announced.

That encyclopædia, as he ventured to call Mr. Baldwin-Wiseman's Paper, had only recently come into his hands, and he had not had time to go into it. He trusted on some future occasion they would be able to resume the present discussion, and abstract some practical

information from what the author had laid down. A central body established to collect information was almost essential, and he personally considered that nothing could be done to improve our present system until they had that necessary information in regard to the warring elements that bore upon it. Most of them were interested in water, clean or dirty, and probably many of them in both, but it was quite impossible to reconcile all the conflicting elements until a mass of statistics had been collected and it had been carefully laid down, how far one interest should be subordinated to another, and the lines upon which they should act. Take, for example, the question which had just been raised by Mr. Scoble as to whether the standard of purity should be the same all along the course of a river. As he understood it that difficulty chiefly arose in rivers where salmon hitherto had been found. Persons interested in salmon rivers desired that the water should be pure all through, and when the upper reaches had been slightly polluted manufacturers down the stream said they did not see why they should not get what advantage they could by some slight increase in the pollution. If we were to have different standards set up it was obvious it would be offering a premium to one part of the country at the expense of the other.

He was pretty intimately acquainted with certain districts in the country in which this question of water supply and river conservancy was keenly taken up, and he remembered the West Riding of Yorkshire Rivers Act, 1894. After it had been in force for many years it had proved very ineffective—and speaking from his own knowledge, he doubted if the streams were any better now than they were fifty years ago. Unless there were a storm on the hills, or an overflow, there was merely

ordinary compensation water supplied to the stream in a dry season, and while that was possible he did not see how they could hit upon a perfect remedy.

They had to consider the interests of trade—the fishing community and the other interests represented by the list, twenty-nine in number, which the reader of the Paper had given in Table 1 of Appendix I. There were those of the authorities for the control of navigable streams and commissioners of sewers, &c., besides the hundred and one interests of private owners in water under their own land. With all those conflicting elements it was obvious that they had to find some means by which they could be reconciled without injustice. It was very well to look back to things which existed at the time of the Romans on which the common law was based, but from such simple beginnings one could not lay down a system of local control applicable to the present time. The difficulty was to apply laws based upon circumstances existing a thousand years ago to the complicated conditions of our present civilization.

He had had a considerable professional interest in the Port of London Authority at the time of its formation, and he remembered meeting members of that Commission who were engaged in the consideration of that Report, and one of them said to him, “ I was put on this “ Commission, as I dare say you know, because I formed “ a harbour before, and I thought I could do it here and “ should have no trouble, and if I started fair and clear “ I could, but the moment I sat down to do the right “ thing I found there were interests that had grown “ up for 200 years, and under which people had acquired “ their rights, and spent their capital, and I could not “ sweep all that away.” He said, “ You have to consider

“ how you can make things fit in so as not to do injustice
“ to anyone.”

That was what he feared would be the difficulty here, and while it was perfectly sound that we should seek information from a central board, he doubted whether they would be able to form a board to which could be committed such diverse functions as would necessarily be involved in dealing with the whole of the water resources of the country. He quite agreed with the formation of a body for the collection of material, which they could then have for discussion. Every point of view might be represented—the sanitary view; the body seeking supply for domestic consumption for the inhabitants of a certain district; traders wanting water for manufactures; those concerned in the effluent when it went away; and those affected by questions of underground water and where one took it from. They had remarkable information on the latter point in the last report of the Royal Commission on Sewage Disposal, where it was shown that in 48 hours bacteriological germs travelled something like two miles in the chalk. They might all give their views, based on personal experience, but until an enormous mass of facts had been collected under the extraordinary pumping conditions now existing at different places, they could not really tell what the results would be or how far water might come, or how far they might have to deal with a question such as that which arose at Cambridge recently on the pollution of water by a sewage farm.

All those matters required careful consideration, but it was not easy to find among the class of people that were ordinarily put on boards persons competent to deal with the question. It was almost impossible for ordinary men to deal with more than the one problem in

which they themselves were interested, and he was afraid they would have great difficulty, when it came to putting together the information collected, to discover enough many-sided men to take up the subject and work it out in the public interest. As a rule they found each division interested in its own business, without time or inclination to understand somebody else's. The result was they got interests warring together, something like that which was once considered to take place between the microbes in a septic tank, in which they were striving to purify the effluent.

Mr. A. P. I. COTTERELL (Fellow) said he was somewhat in the same position as the last speaker, in not having fully digested the valuable encyclopædia that had been presented to them; anything he said therefore must be very brief. He apprehended that the remark made by Mr. Baldwin-Wiseman on page 188 "that the "question of water conservation appealed to different "countries in different ways" led us to inquire in what directions it appealed to us in England. Each country had its special needs, and the importance of water for the purposes of power, such as was general in Canada or other countries mentioned in the Paper, did not appeal to us in this country so much as the conservation of our water resources for domestic use, and for the purification of our rivers to prevent them from becoming a source of danger to the health of the people. The third consideration mentioned in the Paper—the regulation of floods—was one that also needed attention. Many of our valleys were liable to be flooded with more or less regularity, yet so far as he knew there were very few records of the discharge of our rivers (except upon such rivers as the Thames) to help us in so regulating and

training them as to prevent the damage so often done by floods. Developments were constantly going on, due to the increase of population or to their habits, and due also to improvements carried out by those living in the higher reaches of the river, all of which might have the effect of considerably altering the incidence of the flood discharge lower down.

He had in mind a case in Gloucestershire, where, through the improved land drainage of a large valley, an enormous amount of water was sent rapidly down the river to flood the country below. In fact, some twenty years ago more than £100,000 damage was done at Bristol by river floods, most of which was caused by improved land drainage higher up the river, whereby flood water reached the city much more rapidly than had formerly been the case. Such an instance showed the necessity of supervision by some central authority.

Then in regard to another feature, he had himself been interested in the River Lee in recent years, which under the Rivers Pollution Prevention Act of 1876 was specially protected as a source of water supply for London. This measure whilst useful at the time now seriously needed attention, and required modification which to his mind could only be brought about by a Government authority. It was a question how long the River Lee should continue to be a source of water supply. As they knew it ran through a large district of Hertfordshire, but Hertfordshire was now a great residential district north of London, and the population was increasing in the valley of the Lee, and it was obvious that with the increase of population there must be drainage, and the only available place for the disposal of the effluent was the River Lee.

The Metropolitan Water Board and the Lee Conservancy very properly objected to the increased pollution of the river, but on the other hand they could not stop the population from growing, and the County Council only recently appointed a deputation to the Local Government Board in order to bring the subject before them.

He knew of no authority short of a Government Department that could settle the difficulties between these three authorities—the County Council, the Lee Conservancy, and the Metropolitan Water Board—all of them trying to carry out their duties in a proper manner. To that extent it seemed to him to give the answer to the last speaker when he said many years must elapse before any administrative changes could take place. He agreed that the creation of another body might have all the elements of weakness that the Boards had to-day, but the obvious remedy was to put the whole thing in the hands of a Government department, either such a department as the author indicated, or a department of the Local Government Board. The latter was eminently fitted by long years of experience to undertake such work, and in such a comparatively small country as England it would not be too much for them to fulfil every one of the duties outlined in the Paper.

It had been said that the Government were dead to the subject, but he believed they were very much alive to it, and that before very long they might bring forward a proposal, not perhaps quite on the lines of the Paper, but somewhat like them; and therefore he thought discussions of that kind were very useful and might be a means of fixing a half-formed determination on the part of the Government. He congratulated the writer of the Paper for that reason and also on

having given them such an exhaustive volume of information as to what was being done in the various countries of the world. The information would without doubt be very useful to all who wished to investigate the subject.

The PRESIDENT said, if no other gentleman wished to address the Meeting on that occasion, he proposed that the further discussion of the Paper should take place after the reading of Messrs. Bidder and Graham's Paper, to which Sir Alexander Stenning had referred, which would take place some time in March.

He much appreciated the trouble and investigation which Mr. Baldwin-Wiseman must have devoted to the preparation of the Paper, and personally he thought it most desirable that there should be a central body which could control the authorities interested in these matters. Mr. Cotterell had cited one instance in Hertfordshire, and he would give another in the same county. Only a year or two ago the Water Board proposed to take all the water in a part of Hertfordshire, and to compensate the streams with the effluent from the sewage farms which they were going to construct to take the sewage from that part of the county. The opposition of the inhabitants had, however, been so strong that they withdrew their Bill.

This Parliamentary Session the Board were applying for powers to construct huge reservoirs in the neighbourhood of Wraysbury, one of the most difficult areas to deal with, and one through which the underground Thames flowed, without the slightest apparent consideration of flood areas. They were putting those reservoirs in such a position—he spoke as a surveyor, and not as a water engineer—that it appeared to him they must increase

the liability to flood, and throw the upper as well as the whole of the water of the underground Thames back into Eton and other towns up the river.

They might easily have constructed these reservoirs in the neighbourhood of Stanwell where there were already two huge reservoirs right out of the flood area, which were excellent for the purpose and where the whole of the land was practically occupied for agricultural purposes without any residences, whereas where they proposed to put them a considerable number of houses would be swallowed up and others much damaged. The 30 or 40-foot banks of the reservoir would be built near to the river, and would thus spoil some of the most favourite parts of the river within easy distance of London. If some disinterested public authority were to supervise that scheme it would not only be an advantage to the people of London, but a great boon to the people in the neighbourhood they were trying to exploit.

The vote of thanks having been put to the Meeting and carried unanimously,

Mr. BALDWIN-WISEMAN, in reply, said he would like to thank them for the vote of thanks which had been proposed by Sir Alexander Stenning and seconded by Mr. Scoble. Sir Alexander had referred to the decrease in the available underground water. This was due to a variety of causes, and many modern works of improvement tended to increase the difficulties of water supply. The enormous increase in urban area, and in pumping, and in the volume of underground water which was allowed to run to waste in quarrying and other work all tended to reduce locally the underground water level,

and so the tendency was towards decreased percolation and increased draught on the springs.

Mr. Scoble had confirmed the author's statement that legislation in this country was piecemeal and permissive, but although he (Mr. Baldwin-Wiseman) had quoted some of the foreign countries as being arbitrary in the matter of water, still, even in the United States of America, where they were administering a new or at least a sparsely populated area, they were not getting along quite smoothly. Only in *The Times*, of January 18th, there had been an account that the Board of Engineers, appointed by President Taft to investigate the work of the Reclamation Service, reported that the most uncertain feature was the water supply, and that wherever possible steps should be taken to secure an early adjudication of water rights, in all projects where such adjudication had not already been made, and that pending such action expenditure be kept to such works within the probable rights of the Government.

He quite agreed with Mr. Harper as to the inadvisability of hasty legislation, and had tried to emphasise it in his Paper, which was written more to show the immediate necessity for collecting information than to urge the creation at an early date of water boards, because there were so many conflicting interests that he feared the water boards, if created forthwith, would only be spending money without any appreciable corresponding benefit.

They should endeavour to collect all the information possible, which would be available for Parliament, professional men, and others interested ; but on the question of administration they should be very guarded, and not rush to some of the extremes which had been suggested by some of the advocates of conservancy. For instance,

some had said that the county councils should dominate the water administration of the country, but there were, however, many other interests besides those of the county councils, and he thought the new authorities should represent every water interest, and then each of the new bodies under the general supervision of the Government, as represented by the central authority, might thresh out the scheme, and then, as was not unusual when conflicting interests met, a compromise might be arrived at and a plan might be evolved which would suit the needs of the district and satisfy the more moderate representatives of all sectional interests.

As to standards—in Lancashire and Yorkshire, for instance—high-class purity of a stream would be absurd. As they knew, there were salmon in the River Don a hundred years ago, but he did not suppose any fisherman expected there would be salmon there again for another hundred years at least, even if river boards did come into existence.

Speaking from the standpoint of one who had conducted a lengthy investigation upon underground water velocities, he could hardly accept the statement as to the high velocity at which bacteria travelled in the chalk.

Mr. Cotterell had said he was of opinion that a department of the Local Government Board was the best body to administer the water resources of the country. That of course was a matter of opinion, as it might or might not be advantageous for the Local Government Board to undertake the work, for it already had many duties to undertake, and it might be that a separate Hydrographic Board could better take over the duties and powers with regard to water from the various Government departments. Several Royal Commissions had evidently had the same idea, since they, too, suggest the central

authority might be a department of the Local Government Board or a new department. Some of the riparian owners in Lancashire and Yorkshire would, he thought, hardly endorse the supervision of that body. Others suggested the Board of Agriculture which already had a good deal to do with drainage improvements; but that, however, was a mere matter of detail and, like the formation of the river boards, should be left until sufficient evidence had been collected, and until societies and institutions such as theirs, or a Royal Commission, had threshed the matter out thoroughly and a considerable amount of well-digested information had been obtained.

He thanked them for the vote of thanks they had passed.

The Meeting then closed

THE EVOLUTION OF FIRE-RESISTING CONSTRUCTION.

BY WILLIAM WOODWARD, F.R.I.B.A. (FELLOW).

*Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION held on Monday, 6th February, 1911.*

LESLIE ROBERT VIGERS (President) in the Chair.

To the outside observer buildings are now erected—
apart from questions of architectural style and taste—
(or the absence of them) much as they used to be, but
the professional man knows that, to employ a well-known
expression, a “sort of” revolution in fire-resisting
building construction has taken place during the last
fifty years or so.

It has been truly said that there is nothing new
under the sun, and I have little doubt that, if we could
get at beginnings, we should find that Noah's Ark was
not entirely free from some kind of metal, although we
know that there was no necessity for protection from
fire so far as that particular structure was concerned.
There is a passage in Revelations which reads: “And he
“shall rule them with a rod of iron, as the vessels of a
“potter shall they be broken to shivers.” This, I think,
shows clearly that iron rods were in existence in those
days.

As early as 1835 we find Mr. George Godwin reading

a Paper on the "Nature and Properties of Concrete," and on its architectural treatment. He showed how concrete had been used largely as a building material by all the principal civilised nations of antiquity; how Alberti had described walls made of it, nearly in the same way as is done now, by moulding it between boards; how Pliny had described cisterns made of it; and how many of our principal buildings, including St. Paul's and Westminster Abbey, stand upon concrete foundations dating from Roman and Saxon times.

One wonders what our cathedrals would be like if the twelfth and thirteenth-century cathedral architects had known the uses and value of steel. They knew the value of iron tie-rods, or we should not have left to us so many as we have of the beautiful monuments of their scientific and artistic achievements. The areas of the points of support and the buttress resistance to thrusts of roof and vault are light enough as they are, but with our knowledge of steel construction these grand old constructors would probably, to an even greater extent than is the case, have afforded ground for wonder and admiration. Their grouped shafts in nave and aisle might have, for aught we know, presented to the eye the naked steel, and we should have thereby lost the beauties of Purbeck marble and stone. Or they might have encased their skeletons in Purbeck or stone, and thus deceived the innocents abroad much as they were deceived up to the discovery that what they had thought to be fine stone vaulting was really wood made to imitate stone. The Italians are past masters in these arts of deception.

Even the clever modern critic has been deceived over Crosby Hall, for after all the abuse of the "Vandals" who did not mind its destruction, some of us know that

most of the roof pinnacles, which were supposed to be oak, were really cast-iron grained to imitate that material, and that really very little of the old work remained. These pinnacles call to mind the caustic observation of Bismarck at the Berlin Conference that one of our statesmen was a "lath painted to look like iron."

We know what terrible adjectives have been hurled at the engineer and architect of the Tower Bridge because its skeleton steelwork is encased in masonry, but I have always been at a loss to appreciate the adverse criticism. The majesty of this bridge has, to my mind, been vastly increased by this casing, and there is, I think, no more ground for adverse criticism of the bridge than there would be as regards the encasing of our own skeleton anatomy with human flesh.

Evolution is sometimes slow in its working, but the evolution of fire-resisting construction in our buildings cannot be said to be of prolonged growth. It was the knowledge and appreciation of the uses and value of concrete, as much as of the uses and value of steel, which gave rise to that impetus in their combined use which has culminated in what we know as reinforced concrete construction.

In 1854 architects were keenly discussing the construction of concrete floors, roofs, and walls, and their experiments led no doubt to a liking for the material as fire resisting; as one which could carry very large unsupported areas, and which was cheap. There seems to have been at that time some difference of opinion as to the embedding of iron in the concrete, and as to its employment as a finished material in architectural decoration; but there does not appear to have been any difference of opinion on the fact that concrete as a constructive material, whether with or without iron or steel

reinforcement, depends to a very large extent indeed upon the care with which it is mixed, and that no supervision can be too great to ensure strict compliance with this absolute condition.

Many years before 1854 Fox & Barrett's fire-resisting floors, and other floors possessing that quality, were in vogue, and such firms as Homan & Rodgers and Dennett & Ingle were paying great attention to this important subject of fire-resisting construction. French architects and engineers in particular were also devoting their labours to the same end, and although the French methods differed from ours in detail much the same ideas prevailed, except that their construction was always much lighter than ours—they took greater risks. In spite of this I have not heard of a case of failure in Paris due to the collapse of a floor by reason of insufficient strength per foot superficial.

I find an interesting statement made by Mr. Wyatt Papworth at a Meeting of the R.I.B.A. in February, 1854, when the French and other methods of constructing iron floors were under discussion. An obelisk erected in 1776 on Putney Heath, by order of the Corporation of London, commemorated the satisfaction felt by committees of that body with experiments made in that year and described in a pamphlet, printed in 1785, entitled "An account of the invention and use of fire-plates for the security of buildings and ships against fire." The resistance to fire was accomplished by applying the fire-plates above and below the timbers with dry sand or rubbish between them. A room was filled from floor to ceiling with faggots and pitch and tar, and the result seems to have been most satisfactory as a prevention from fire. The inventor's experiments, however, showed that "the only way to check a fire was to prevent the

“ access of air ; for flame would inevitably calcine such
“ materials as concrete and plaster.”

Fifty years ago, as some of us can remember, we knew very little indeed, comparatively, of concrete for constructional purposes, but architects were even at that period beginning to test and to study this form of construction. I have little doubt that we shall some day discover that the Egyptians knew all about reinforced concrete, and that the tomb of a departed Pharaoh owed its preservation to a mixture of iron and concrete. To prove that fifty years ago architects began seriously to consider concrete construction, I find that Mr. T. H. Lewis, on December 14th, 1857, read a Paper at the Royal Institute of British Architects on some experiments upon concrete. Those experiments were directed to the suggested sensible loss in bulk of the ballast independently of that of the lime, and to demonstrate that the materials, after being mixed together, expand considerably. Mr. Lewis stated that this idea of loss of ballast was so prevalent that a respectable builder asked him to allow, in calculating the price of the concrete, one-seventh more ballast than the concrete cubed to. The general result of the experiments with lime concrete was “ that the
“ whole mass, made into concrete, occupied precisely the
“ same space as the dry ballast, viz., one cubic yard, all
“ the bulk of the lime and water (being about two-fifths
“ of the ballast) being lost, but none of the ballast itself.
“ The surface was carefully levelled and thin boards
“ tacked over so as to ascertain if there were any expansion in the setting, but none could be perceived. The
“ weight of the mass was 27 cwts.”

Then on June 5th, 1871, two Papers were read before the Royal Institute of British Architects, with Mr. Edward P'Anson (a Past-President of The Surveyors'

Institution) in the chair. One Paper was on the use of Portland cement-concrete as a building material, by Mr. Thomas H. Wonnacott, in which he speaks of the "novelty of the material." Mr. Wonnacott dealt with concrete in walls, and he opined that it was to a great extent incapable of artistic treatment except at great cost for moulds, patterns, &c., adding that he was persuaded that neither brick nor stone had anything to fear from competition with it. I am surprised to find Mr. Wonnacott stating, although as he himself says it may appear strange, he had not found that "a larger proportion of cement than one in eight increases the strength of the concrete. On the contrary, it appeared to diminish it." For ordinary walling Mr. Wonnacott found 1 in 10 sufficiently strong, and he remarks that "in engineering works in Copenhagen 20 to 1 was the portion used," and further that he was informed by an experimenter that "he had gradually lessened the portion of cement to 1 in 24, and found it then make fairly strong work." This proportion would rather startle the engineer and architect of to-day, and I am not surprised to find Mr. Wonnacott saying that in such a case the "conditions must have been exceptionally favourable," and the "dispersion of the cement among the mass perfect." This perfect dispersion of the cement I shall refer to later on when speaking of reinforced concrete.

The second Paper above referred to was read by Mr. A. W. Blomfield on "Concrete Building." This Paper was confined to the consideration of concrete in walls constructed *in situ*, by filling concrete into cases or moulds, made to shift to the various heights and positions as the work proceeds. This system has, we know, since been very largely adopted.

Mr. Blomfield confined his remarks principally to the limits which the material imposed on architectural design and decoration, and I think we shall all be in accord that at present no form of concrete exposed externally as concrete can take the place of stone or brickwork for architectural treatment, and Mr. Blomfield wisely said that nothing could be done in the way of artistic treatment so long as the only aim was to show how well concrete walls could be made to imitate some other material and some other method of construction. Mr. Blomfield quite rightly protested against the idea of a concrete arch, and said that it would be as rational to scoop out the underside of a York landing or a Portland stone lintel into an arched form to increase its strength as to mould a mass of concrete into such a shape with the same object. There can be little doubt that forty years ago fire-resisting construction in floors was greatly in favour, and in that direction Mr. Blomfield said, "I do not think its capabilities without any adventitious aid of iron girders or other supports over considerable areas has ever yet been properly tested." We know the gradual increase in later days of unsupported areas of concrete in floors, but bearing in mind the great importance which should be attached to the mixing of the concrete, I do not think it would be wise to push this increase in unsupported area too far.

Mr. Edward I'Anson in summing up the Papers made one or two useful remarks, which are quite as useful to-day. He was convinced that unless thorough dependence can be placed upon the honest and conscientious execution of the work by the contractor, concrete is a dangerous material to use, inasmuch as a small percentage of inferior material in Portland cement would cause the ruin of the entire work. Mr. I'Anson testified

to the great desirability of not using cement too newly made, and mentioned that the Metropolitan Board allowed concrete buildings to be used in London, but insisted upon a considerable amount of hoop-iron bond, and would not allow concrete walls of less thickness than brickwork. So that at this date "reinforced concrete," in the shape of hoop-iron bond and concrete, was adopted.

Then in April, 1876—with Sir Gilbert Scott, R.A., President, in the chair, a Paper was read at the Royal Institution of British Architects by Mr. Alexander Payne on "Concrete as a Building Material," and this dealt principally with the subject from the point of view whether it could be employed ornamentally for the fronts of buildings and ugliness avoided. Mr. Payne observed, and this is an important matter in dealing with concrete and iron combined, that once you bed iron and keep it from the air you protect it entirely from rust and oxidation. Mr. Payne laid it down as an axiom that concrete offers unusual facilities as a material for walls, &c., "from the readiness with which iron or other ties can be embedded in it in any direction to resist any thrust or tendency to separate in the structure." The reader of the Paper showed a design for a street façade in iron and concrete, but I cannot say that it would induce me, personally, to substitute concrete for stone or brick. He would not imitate the projections of stone and brickwork, but would obtain as large wall spaces as possible and as few projections, ornamenting the work instead by indentations, calling to recollection the magnificent ornamentation of the Alhambra and of the Mahomedan buildings of India. Mr. Payne went so far, in his intense admiration for concrete, as to advocate the panelling of the interior of an apartment and "do away

“for once with the everlasting wall-paper,” and he practically described reinforced concrete when he proposed to “use iron embedded in concrete for the purpose of giving tensile strength to prevent fractures caused by thrusts of arches, vaults, &c., instead of opposing them by buttresses as is done in brick or stone.”

The above Paper was followed by an interesting discussion. Mr. W. H. Lascelles referred to warehouses gutted by fire, where lintels consisting of concrete with pieces of iron, three inches by a quarter of an inch, embedded in the centre were not affected by the fire, although the cills and other parts were. The concrete was mixed in the proportion of one of cement to six of breeze. Here we have reinforced concrete in lintels.

Mr. P. Brannon was a great believer in iron and concrete, and he made window heads by bedding rods of angle-iron and dispensing with any framing or bressummers. He had put concrete doors in St. Paul's Cathedral, under Mr. Penrose, “in order to render fire proof that portion of the dome to which the public have access,” and had built some cottages in Derbyshire where the concrete walls were made with the “slag of furnaces ground with silenitic lime,” the compound being “nearly as good as Portland cement concrete.” Mr. Drake, at the same meeting, was most earnest in his partiality for concrete in floors, roofs, and staircases, and he asserted that good Portland cement concrete, or good silenitic concrete, or good lias lime concrete, correctly treated, “will never either contract or expand in the smallest degree after having once set.” Mr. J. Tull stated at the same meeting that slag from the blast furnaces was an excellent material because it was easily crushed and furnished in the crushing a sharp grit. He did not

approve of iron in concrete floors. His first attempt was with an upper floor 19 feet by 13 feet without any iron joists; his second attempt was with a drawing-room floor 40 feet by 16 feet, and he contended that that floor was stronger without iron than it would be with it. The thickness of the floor was 11 inches reduced to $4\frac{1}{2}$ inches in the middle, and he believed there was not a crack or blemish to be found in the whole.

Major Seddon, Royal Engineers, made some important remarks on concrete. He was not so much afraid of the work being scamped, as of failures arising from the ignorance of the contractor or his workmen. He had a slab of concrete made 6 inches thick and 14 feet 6 inches by 13 feet 6 inches clear of the supports, which were 14-inch brick walls, and after twenty-one days setting, eighty men marched on to it, who marked time at the quick and double, and then jumped upon it altogether, without having any effect whatever upon the concrete. The whole of the unsupported part of the slab was then loaded with bricks, until an evenly distributed load of $10\frac{1}{2}$ tons was piled upon it, when it gave way suddenly. The major stated that no iron whatever had been used in any of the concrete floors designed by him, as he "preferred using iron where he knew what work it was "doing within certain limits," whereas, "when iron is "embedded in concrete, no one can determine the "relative proportion of the work which falls to the "share of the iron and the concrete respectively." Mr. Aitchison was desirous that experiments should be tried with and without the iron, "to show whether any "or what additional strength is gained," and Mr. Arthur Cates made some interesting references to the work of Mr. Brannon by which the cupola of St. Paul's was made fire resisting. Mr. A. Payne (the author of the

Paper) agreed with Mr. Charles Barry that "if concrete " fails it fails suddenly and disastrously."

It will be observed that I use the term " fire "resisting " instead of " fire proof," as examples of large fires prove that at the present moment there is nothing which has been invented to make a building " fire proof." The most we can do is so to construct our buildings as to minimise as much as possible the risk from fire and smoke.

The London County Council (General Powers) Act, 1909, now enables skeleton-framed structures to be erected, at the same time permitting a reduction in the thickness of external walls required under the Act of 1894; and so far as I have been able to judge, the anticipatory objections to the provisions of the new Act have been modified, and it seems to work well and does not entail those delays and interferences which some members of the Profession thought would be likely to arise.

We may now conclude that fire-resisting material has come to stay with us, and I think we may congratulate ourselves on the practical immunity from accident as regards such construction in this country.

Before coming to the most modern of fire-resisting constructions, viz., " Reinforced Concrete," I propose to say a few words on other methods. There is the plain and simple rolled iron or steel joists, some 3 feet apart, filled in between with concrete or breeze and Portland cement; this demands centering and at times trouble is caused by the exudation of moisture just when it is not wanted. One of the early floors, which still holds its own, is what is known as "Dennett and Ingle's." The steel joists are from 4 feet to 10 feet apart, according to the particular

form of construction, in some cases the concrete is with arched and in others with horizontal soffits, each method lends itself to either joists on plates bearing on the concrete, to wood block flooring, and to soffits either plastered on the concrete direct, or with ceiling joists and lath and plaster in the usual way. The material is concrete composed of highly calcined gypsum and broken brick, or of Portland cement and an aggregate of broken brick and gravel. This method demands temporary centering. Messrs Dennett and Ingle recommend the avoidance of coke breeze as an aggregate as being unsuitable, either from the point of view of strength or fire-proof qualities. They instituted a series of experiments for the encasement of stanchions, columns and girders which proved to be most successful. Many buildings where their construction was used have caught fire, and I believe that in every case the fire was localised in consequence of this form of construction and much valuable property saved. Amongst the many buildings provided with Dennett and Ingle's floors are the Foreign Office, Royal Courts of Justice, St. Thomas's Hospital, the National Gallery, and a number of asylums and theatres.

We then get to the various forms of fire-resisting floors consisting of brick or tile arches between iron or steel joists; different forms of terra-cotta laid on the joists and carrying concrete—such as the Frazzi floor—all doing away with the necessity for centering, which is an important matter not only on the ground of expense but for the fact that centering keeps back moisture and rather lends itself to careless filling in on the part of the workman. The terra-cotta of these patent floors is made so that it can easily and accurately be laid in lengths between the steel joists and the soffits

plastered afterwards. The objection to them is that the terra-cotta is somewhat brittle and fragile in substance and requires care in handling and in knocking nails in it. These floors are, however, commendable, and are being made—the system is also much used in partitions—so that nails can be knocked in the terra-cotta without enlarged fractures. I think also that they are as fire resisting as could be wished.

Speaking generally, with reference to fire-resisting construction, it is to be regretted that England does not “wake up” more rapidly and bring itself up to the German excellence in steel work. For example, I believe England cannot roll a steel joist with a depth equal to that attained by the Germans; but I think with regard to cast-iron, England holds her own. The perfection to which cast-iron stanchions are now brought, and the enormous weights which they carry, leads one to question whether their continued employment is not superior to steel as regards weight in compression, and to my mind, when combined with ordinary steel joists with either one of the patent floors or ordinary concrete filled in, they bring us as near perfection in fire-resisting construction as we can hope to attain.

We have all had to do, too, with *wood floors*, and there are still men left who would prefer—in cases of big fires, where the “devouring element,” as the penny-a-liner says, has got strong hold—a solid wood floor to all the steel and concrete floors ever invented. Some years back experiments were made with solid wood floors, *i.e.*, wood joists of the usual scantlings, laid close together, side by side, and I think the result of such tests was that these floors would stand concentrated heat better than the steel and concrete floors. I remember watching a fire some years ago, where the building had

a canted angle, and the support at each point consisted of a fir post 9 inches by 9 inches. The building was completely gutted, but the fronts were intact, due, I think, to the wood supports, which stood the fire well, and when I inspected them the following day I found that their centre parts had been consumed to within about 3 inches. I doubted very much whether steel stanchions or iron columns would have been left to tell the tale. We all know, too, that the most deceptive fire-resisting material is stone or granite in staircases, and stonework generally, brickwork and concrete being far more reliable.

The evolution, though, of fire-resisting construction in the form of reinforced concrete may be termed a revolution; because not only do we get it in floors and walls but in piles and girders.

That too much care and attention cannot be given to any form of construction, or the employment of any material which will minimise, if not abolish, the risk from fire goes without saying; and it is this dread of fire in buildings which necessarily alarms those upon whom falls responsibility in case of death or injury from fire. Recent occurrences in business premises make one tremble at the thought of fire, where women and men sleep in these houses, and where we know that an outbreak must result in a sad list of deaths. The London County Council have from time to time initiated legislation having for its object the relief of such risks, and they have by their recent Act permitted the use of steel-framed structures which will encourage their use and lead to filling in with fire-resisting material, and so gradually tend to lessen these too frequently recurring accidents.

Enormous strides have recently been made in the

manufacture and use of reinforced concrete for all sorts of purposes besides building construction, viz., bridges, staircases, &c., and personally I place considerable reliance upon those engineers and architects who have made the subject a study. I know it is said that "Prejudice vanishes when knowledge comes," and if I am, at the moment, prejudiced against the use of reinforced concrete it must be put down to my ignorance, and to a conservatism which should be absent when dealing with inventions.

Frenchmen may be said, I think, to have been the pioneers in this form of fire-resisting construction, but an English architect, Professor C. N. Reilly, has just constructed, at Shacklewell, a church practically of this material throughout, and both in design and appearance, from the illustration I have seen, it does not present any feature of ugliness. I could sleep comparatively happily in a building where the walls and floors were of this material, but a little nervousness would creep over me if I knew that the piers or vertical points of support were of concrete with embedded steel, and that nervousness would be alarmingly increased if I knew that the girders, with a bearing of say 30 or 40 feet, were relied upon to prevent collapse. It would be no comfort to me to be told that provision had been made for ten times the load which could ever be put upon the floor, and I should begin to think of a few matters which would tend to upset my equilibrium.

We all agree that in the first place great reliance is placed upon the Portland cement used. It should not be too fresh, it should be most finely ground, and it should be laid out on a boarded floor and turned over for a few days before it is used. Is this always secured? Then the proportion in which it is mixed with the aggregate

is of moment. Is this always attended to? Of course, in all concrete work great care is required, and strict supervision necessary; but in modern work I am afraid the limits are being pushed a little too far. The specification and drawings may be perfect, but the safety of the structure depends upon the mixing of the concrete and the proper and regular embedding of the steel or iron work. Now this mixing is left as a rule to labourers, and although the specified quantity of steel and aggregate may be there, if more of the Portland cement finds its way into one part than should be, and less therefore in another part, I should certainly become nervous if a moving load with consequent vibration were brought to bear on the girder. I am also not clear as to the effect of the concrete on the steel or iron reinforcement. An essential is, of course, perfect dispersion, and from my experience this would in the ordinary way be very difficult to attain.

Then as to expansion and contraction. Some authorities say there is none in this reinforced concrete, but whether that be so or not, is the expansion or contraction, if they do take place—and I think in many cases they do—equal for the different materials? I mean does the concrete go with the steel, and the steel with the concrete, or does each go its own way? If they do go their own way, then risk is at once present. Then does the steel or iron oxidize? We are told they do not, but we do not know, and I suppose we must wait and see. Directly one of these concrete girders yields to any appreciable extent, then I anticipate complete collapse; concrete is not elastic, and metal is.

Taking into consideration these few questions, the result perhaps of a highly strung and over-nervous temperament,

and without wishing in any way to place my views in opposition to those distinguished architects and engineers who are so freely using this reinforced concrete, I would wish to make this Paper perhaps a little useful by concluding with a few words of caution, which may or may not be acceptable.

First see that you specify the best English Portland cement, and then see that you get it. Let Belgium and Germany keep their Portland cement for themselves. Then see that your Portland cement is not used too fresh, and that it is turned out of the sacks on to a boarded floor for, say, three days, and turned over two or three times in the interval.

Then determine as to your aggregate. Avoid burnt ballast but do not be afraid of well and evenly broken brick mixed with stone ballast, or breeze quite free from particles of coal. Then do not mind spending a little money on reliable clerks of works. A hundred pounds or so in salaries to such men, simply to supervise the mixing of the materials and the proper disposition of the reinforcement, will probably save many thousands of pounds and many lives.

The evolution of fire-resisting material may apparently know no bounds ; it has at the moment culminated in reinforced concrete put now to all sorts of uses. I am only concerned in *buildings*, and as regards these buildings I should be sorry if a word I said here led to any diminution of the use of reinforced concrete ; and I hope that we shall have to-night a good discussion, and that I shall hear enough to make me sleep comfortably at home in an early Georgian house where the joists are of deal, 9 by 2, with a 16-feet bearing. But, Mr. President, may I say one final word to *architects* (I leave engineers to take care of themselves) : do not tremble at your floors and

roofs; be very confident about your walls; be a little over-careful with your piers or other vertical supports; but, be over, and doubly, and trebly anxious about your *girders*.

Sir HENRY TANNER (Fellow) said it gave him great pleasure to propose a vote of thanks to Mr. Woodward, who had read a most interesting and useful Paper, and one which was likely to produce a good discussion. He did not propose to follow him in his historical observations, but he thought that possibly an earlier account of the use of metal than that of the Ark might have been found, and so far as the Ark was concerned, if it were made in the present day it might be constructed of reinforced concrete, because only that day he had received a post-card which announced the making of the first concrete barge in this country.

The evolution of fire-resisting construction seemed to him to synchronise with the improvement in the manufacture of Portland cement and also the changing from iron to steel in the matter of joists. Before that time it was seldom used. He personally began to use that form of floor twenty-five or thirty years ago and he now seldom used wood. Wood had got worse and worse besides being much dearer than formerly, and of course it was less reliable than concrete, the manufacture of which had become better and cheaper year by year, so that there was little chance that the solid wood floors mentioned with approval by Mr. Woodward would ever again come into general use.

Of course it was only of recent years that Portland cement had attained to its present excellence, and they could now rely on it far more than formerly—indeed, although Mr. Woodward had said that it should be

spread out to aerate, he thought that idea was now almost abandoned, although it was necessary in some cases. Mr. H. K. Bamber had recently read an exhaustive Paper on Portland cement before the Institution of Civil Engineers, and throughout a long discussion, lasting three or four evenings, all the arguments were against aerating cement in the way Mr. Woodward described. So far as he knew it was not required in the majority of cases, and at the General Post Office the Portland cement had been used straight from the bags.

Steel joists were 25 to 30 per cent. stronger than iron, and the sections were very much more useful than they formerly were; also by using breeze concrete in between the sections could be still further reduced.

He personally used breeze in the manufacture of his concrete, and although many people objected to its use he had never found any inconvenience. Breeze was said to expand, but in his opinion the cement expanded and not the breeze, and latterly even that did not occur because the cement was better aerated than formerly. Those two materials seemed to combine very well together, and that in his opinion was the cause of the "evolution" which Mr. Woodward talked about. The old systems, such as Fox and Barrett's, and Dennett and Ingle's, were patents which were fatal to any great extension of a particular form of construction, because it limited it to particular individuals, and there was generally something to be paid for the patent, but anybody could pack the small steel joists with concrete, and it could be done on the cheapest possible terms.

During the years 1901 to 1906 or 1907 the British Fire Prevention Committee made a great many experiments with different kinds of floors, and in those experiments breeze concrete was proved to be as good as any

and better than most; it was certainly better than granite, better than Thames ballast, and a long way better than any limestone—although it disintegrated underneath it was still sound. In the olden days no one took the trouble to cover the soffits of the joists or the column, but nowadays that was looked upon as an absolute necessity, and every effort was made to hide up the steel and to show the concrete. That was the principle of reinforced concrete.

He was not very fond of tubes of terra-cotta or similar material by way of fire-resisting construction; he did not think they had shown up to any great advantage, although there had been no experiments in the way of fire so far as he was aware. There was a cement tube floor tried some years ago that seemed very satisfactory, but it was 11 inches thick.

Supervision, of course, was absolutely necessary if they had to cover up a material and hide it with another, but he had not experienced any very great trouble in the matter. He had erected several reinforced concrete buildings, and they had proved satisfactory; he had cut holes in them, and had found that the steel thus exposed was perfectly bright, perhaps brighter than it had been when first put in. He had never taken the trouble to remove the rust, except that which was loose. The remainder gradually disappeared in the concrete, and when the latter was cut open the steel was found quite bright. He, therefore, had not much fear on that ground.

Supervision of the workmen was even more necessary than of the materials; they were very careless if one were not always "down on them," and it was not altogether the master's fault. They had got the material, and if they put it in the wrong place the master could

not very well help it unless he had sufficient supervision over every man. If soft wire were used and the pieces were bound together, a good deal of trouble was spared. Of course, no one used German or Belgian cement in this country for work of that character—it was very unreliable.

If he were to go through the points of the Paper seriatim his remarks would grow into another Paper as long as the one Mr. Woodward had read to them, but as there were many other Members desirous of speaking he would refrain.

Mr. HENRY NORTHCROFT (Fellow) said it was a great honour to be asked to second the vote of thanks which Sir Henry Tanner had proposed to Mr. Woodward for his Paper. He personally had found the Paper most interesting, and he was sure that all present would concur in that opinion. Anything that Mr. Woodward produced was sure to be void of dullness, and the Paper was no exception—it sparkled from end to end.

It was certain also to provoke a good deal of discussion, for one could begin at the beginning and go on to the end, and could comment on almost every point that had been raised, so that, as Sir Henry Tanner said, one could occupy as much time as Mr. Woodward had in reading his Paper.

For instance, in the second paragraph of the Paper, it was stated that Noah's Ark did not need any protection against fire, but he would like to suggest that the author's knowledge of Scripture should have led him to the belief that in Noah's Ark there was quite as much risk of fire as of capsizing or running aground, which it eventually did; Noah and his wife and the other individuals in the Ark must have had food, and to cook that

they must have had fires, and from the elementary nature of chimneys in those days he thought the danger was more from fire than from water.

He sympathised with Mr. Woodward on many points in which their views coincided, possibly because they were both old-fashioned; but he thought the sentence which gave him the most sympathetic outflow of feeling was that in which he said, "If I am, at the moment, "prejudiced against the use of reinforced concrete it must "be put down to my ignorance, and to a conservatism "which should be absent when dealing with inventions." They were most of them rather inclined to be conservative in dealing with inventions; he, at any rate, was very strongly prejudiced against the belief in reinforced concrete at present in vogue. It would be unfair to detain The Institution with views which were of so little consequence as his, but he had seen a great deal of reinforced concrete, and he was not yet satisfied that it was going to be the satisfactory material that some people seemed to think.

He was convinced twenty-five to thirty years ago that the best fire-resisting floor that could be obtained was formed of wooden joists close up side by side, and he had not yet seen cause to alter that opinion. There was at that time a Mr. Lewis Hornblower, who was from some points of view a great inventor, and one of his most practical suggestions was that of making a solid floor of joists fixed close together. This floor was tested, and although he was not present at the tests, his father and uncle were, and they came back convinced that nothing could be more capable of resisting fire than woodwork placed close together. He quite sympathised with Mr. Woodward's feeling that if he were asleep in a house with 9 by 9 wooden supports

and a fire took place below, he would sleep more comfortably if he had the wooden supports than if there were iron joists—possibly, however, he might look for a safe way of getting out in either case.

Coming back to the question of reinforced concrete, his own view was that its great success lay not so much in its fire-resisting power as in the fact that floors of that material were able to carry very heavy weights; they could carry over wide areas with reinforced concrete and the construction would do wonderful things in the way of bearing weights not only in experimental tests but in actual fact and in working; they knew that ferro-concrete did carry extraordinary weights in extraordinary positions, and that, he supposed, was the secret of its success rather than its value as a fire-resisting material. He was not at all satisfied that concrete was properly a fire-proof material at all, and he thought Mr. Woodward was right in urging the difference between fire resisting and fire proof. An old district surveyor whom many of them knew, Mr. Robert Walker, said that a coke breeze concrete floor was not fire resisting at all, but rather the other way, and he thought that it would burn. He was not sure that that opinion might not prove to have been right. One of the most important things in dealing with coke breeze was to be sure it was pure and free from any particles of dust, otherwise it was dangerous in use; but he could understand that Sir Henry Tanner always had the very best materials made under the best supervision, and that was the most essential thing in using coke breeze for a concrete floor. The soundness of the materials in the aggregate, and the careful mixture of those materials formed the only method of ensuring safety.

He was told by a reinforced concrete manufacturer recently that the most important thing in the mixture was neither the ballast nor the breeze but the water, and that the more water one put the stronger the floor was. There seemed ground for this view, for if sufficient water were added one might be quite certain that the cement in the body of the material sufficiently permeated the aggregate, and was carried right through the whole, and by that means a homogeneous mass which made for strength would be obtained. The extraordinary remark quoted in Mr. Woodward's paper that cement concrete of 1 in 20 was of sufficient strength could only have been correct if the cement had thoroughly permeated the whole mass.

The principle of inserting iron and steel in concrete to give it additional strength was open to doubt. They must recognise as a fact the extraordinary circumstance that steel had absolute life, and if the steel had been put into concrete and the reinforced concrete were tested, as it often was, while the steel was new, it stood the test, but when the life had gone from the steel he did not think the reinforced concrete would stand the same tests, and he feared that when it had stood some time it would not show the same results as it did when tested new.

The same expert had told him that if a piece of well-rusted steel were put into concrete and a little while afterwards the concrete were opened the rust would have disappeared. The rust in the first instance helped the steel to adhere to the concrete and then was removed by some chemical action that took place between the cement and the steel. Sir Henry Tanner's statement that whenever they opened reinforced concrete they had found the steel bright actually confirmed that informa-

tion. He had seen one of the walls referred to, made with concrete and hoop-iron bands, cut out and all that was left of the hoop-iron was a little streak of brown about as wide as a pencil, but he had not seen reinforced concrete cut so as to note how the steel was acted upon by the chemical action on the rust.

He was sorry Mr. Woodward commended the action of the London County Council in allowing the erection of these American buildings under their new Act. In New York he had seen a good deal of skeleton steel construction faced round with some other material, and a fire taking place in such a building was almost certain to bring it down. The results of fire which one heard of in American cities would testify to that fact; the steel was not able to stand the heat, and once the protective material was removed by the action of the fire and water collapse was inevitable. He could not approve of the steel buildings which were now being erected in London, as they could offer little immunity against fire, and he was sorry to hear Mr. Woodward commend their erection. He wished to second the vote of thanks to Mr. Woodward most heartily.

Mr. E. B. I'ANSON (Member of Council) said he had much pleasure in supporting the vote of thanks to Mr. Woodward for his interesting Paper. He had touched on a great many points which, as Sir Henry Tanner had said, if followed through would take a long time. The evolution of fire-proof construction had been going on for a good many years. So far back as 1854, when his late father built his house at Clapham Common, he built what he considered a fire-proof house, constructed in the old-fashioned way, with rolled-iron joists

and ballast concrete. It had fortunately never been put to the test of fire, but it had stood very well up to to-day.

He knew also of a warehouse in Guilford Street where they used concrete with hoop-iron bond, and that building had also stood very well, and he had never heard any complaint made of it. Some twenty years ago, in building the London Commercial Sale Rooms, he used for the staircases and landings what might be called reinforced concrete, that was Portland cement concrete and granite chippings, with iron rods embedded in it, and the results there had been most satisfactory.

As Mr. Northcroft had said, one great advantage of reinforced concrete was the fact that one could get very long spans and thin floors, whilst the points of support were reduced to a minimum. He knew of no building where that was better exemplified than in Sir Henry Tanner's new Post Office. The supports there, whilst really sufficient for safety, were certain to keep so nervous a man as Mr. Woodward awake, however sleepy he might be. Passing that building, as he constantly did on his way to St. Bartholomew's Hospital, he was astonished at the comparative thinness of the walls and the enormous weight they supported.

To obtain an artistic effect with reinforced concrete buildings was certainly rather a difficult matter for the architect. He had put up small houses in the country all of concrete, and faced them with rough cast, which was now very largely used by the present generation of younger architects in small country buildings, but in town buildings that would not be a very desirable material to use, as rough cast soon became very dirty in London and other large towns. One way of treating it would be to use sgraffito, as the Italians did in their plaster work, and sometimes got good effects by so doing.

He had been very glad to hear Sir Henry Tanner say that when he cut into his floors the steelwork was quite bright, because the question as to whether steel rods embedded in concrete stood or not had been much discussed, and a statement by such an authority was most reassuring. He begged to thank Mr. Woodward again for his excellent Paper.

Mr. HERBERT PHILLIPS FLETCHER (Fellow) said that with regard to the history of the subject, Roman concrete they knew was frequently reinforced with tiles, as they had seen in the excavations in London Wall and many other places. Mr. Woodward had not mentioned the fact that François Coignet took out a patent in 1855 in Great Britain for ferro-concrete work, and Joseph Monier in 1883, but nothing very much had eventuated immediately therefrom. Wood floors, where joists were placed side by side, were undoubtedly very fire resisting, but they were very expensive and heavy, and required much supporting; consequently they were scarcely within the range of practical politics.

He did not think terra-cotta was suitable for fire-resisting work. He was at Baltimore soon after the fire there, and he saw the effects on terra-cotta, and he was not impressed with the way it behaved.

Mr. Woodward had absolutely hit the nail plumb on the base of its longitudinal axis when he laid such stress on the importance of good mixing. In his humble opinion seven-tenths at least of all the trouble that had arisen from the failure of ferro-concrete structures was due to the defective manipulation of the concrete. There was at the present time an important commission sitting at the Institution of Civil Engineers

on the whole question of ferro concrete, and they had issued a most interesting interim report, which it was worth while for everyone interested in reinforced concrete to study.

Of course the best cement to use was of British manufacture, and with regard to this subject he had been recently carrying out, at the City Companies' Trades Training Schools, a series of experiments on cement purchased from different firms, and it was simply extraordinary to find the difference between *guaranteed* English Portland cement—it was as much as 50 and 60 per cent. in samples that he had obtained and tested most carefully. His brother (Banister Fletcher) and himself now insisted upon every truck load of cement having a certificate of analysis with it, and he thought that assisted one considerably.

It was pretty generally held, though he did not know if Sir Henry Tanner would support him, that a proportion of from 1 to 4 to 1 to 5 was best; 1 to 5 was perhaps good enough for ordinary work, and 1 to 4 in special cases. That was to say, 1 of cement, 2 of sand, and 2 or 3 of broken stone or granite, as the case might be.

Mr. Northcroft would be interested to know that in America engineers, in speaking of the consistency of the concrete in reinforced work, talked about "floating" it in, so that unconsciously perhaps he had supported the American engineers in the way that they almost invariably did their work. In Great Britain it seemed to have been the idea to mix it much drier and ram it very carefully, but where they had a number of members of the reinforcement coming together it was not possible to put it in so dry, and therefore more water had to be used. The point was

a debatable one, but personally he thought most engineers were using concrete more fluid than was the custom heretofore.

If the concrete were put in so as to get the maximum of density, and there was no liability of percolation the iron or steel would certainly be in a better state afterwards than when it was put in ; that was to say, provided all the loose scale had previously been scraped off. The rust itself seemed to help fixity in the concrete, and if an iron bar were put in concrete and they put it in a machine and tried to pull it out they could not do it, but when the mass was broken up they would find the iron in a great deal better condition than before it was put in, provided that the concrete had been thoroughly well made and rammed.

Special care had to be taken at the junction of columns with beams, and that was where the danger so often arose, and various experiments seemed to show that concrete made with broken stone and granite was at least 25 per cent. stronger than when made with gravel. The stones should be graded from 1 inch to $\frac{1}{8}$ of an inch and the strength appeared to vary fairly exactly in proportion to the density of the material. With regard to the centering for ferro-concrete, personally, it seemed to him that it ought to be left in for about six weeks.

In reinforced concrete the steel should never come nearer the surface than $1\frac{1}{2}$ inches, as a covering of at least an inch and a half over the reinforcement was essential. In calculating the stresses and strains they must not allow any greater stress on the steel than in unprotected steel structures. That was to say, if they assumed a tensile strain of $6\frac{1}{2}$ tons for steel, they ought not to assume any higher efficiency when embedded in

concrete—rather less if anything. In his opinion it was not advisable to test floors, beams, &c., with more than 50 per cent. above the working load, and to allow a deflection of, say, $\frac{1}{600}$ th of the span, and then there should be no permanent set. Failure had been caused by the repeated application of a load not sufficient to cause failure at first. That was to say, one might put a load on the floor, or whatever the structure was, and it seemed to bear it quite well, but, if this were done again and again, after a time the fatigue of the material was such that it would eventually break down. In going round the building they should look on all surfaces for any brown marks that they could find, because that was a sure indication that the steel was too near the surface; it showed the oxidation coming through.

A very interesting series of experiments were undertaken by the *Commission du Ciment Armé* in 1907, and in tests over a span about 10 feet, with beams made in accordance with the rules adopted in Germany, Austria, Italy, France, and the United States, the factor of safety worked out highest (about 12) in the case of Germany, and lowest (about 6) in the case of the United States. That was rather what one would expect. Owing, however, to the fatigue of materials previously mentioned, he did not think these factors were fair to work with, and they should be divided by two, that was to say their value should be about 6 and 3 respectively.

In testing columns, the elasticity and ultimate strength were considerably less than the values of the concrete and steel taken separately, and although in beams they might allow a stress perhaps equal to the actual stress on the iron if unprotected, in columns it

was necessary to allow very much less. That seemed to be a very important point owing to the tendency of the longitudinal reinforcing bars to buckle.

From various experiments it was perhaps safe to assume a crushing strength of about 2,000 lbs. per square inch for plain concrete columns having a ratio of about 10 to 15 (height to least diameter) and this might be increased by about half by two per cent. of longitudinal reinforcement. This again might perhaps be raised by skilful arrangement of longitudinal and transverse members to 5,000 lbs. Personally he should be very sorry to allow a working load of more than 800 lbs. in any case; he was certain he should not sleep quietly if he did. With regard to the work that was being done in concrete Mr. Webster was constructing a bridge of 150 feet span and 80 feet wide in ferro-concrete, and some of the columns in the Royal Liver Offices at Liverpool were designed to take 1,600 tons. The cost of reinforced concrete as compared with other materials must of course depend on the special circumstances of each case and on the possibility of using local material, &c.; but it was of interest to note that Mr. G. G. Lynde stated that of 40 tenders obtained for two transit sheds of steel construction with corrugated sheets to the roof and sides or alternatively in reinforced concrete, the lowest tender in reinforced concrete was 12 per cent. below all others.

Sir Henry Tanner had also told him that by using ferro-concrete in the new buildings for the General Post Office he had saved some sixty thousand pounds sterling.

He had very much pleasure in supporting the resolution to Mr. William Woodward for his most interesting Paper.

Mr. F. HUDLESTON (Visitor) said they had listened to a most interesting Paper, and had had a most excellent discussion upon it, but there were one or two points he should like to deal with as an engineer. Mr. Phillip Fletcher had mentioned that he thought, in testing reinforced concrete floors, 50 per cent. over the working load was a full amount. He quite agreed with him for the reason that they knew from experiment that if the tie rods of a floor were stressed to 20,000 lb. per square inch, the concrete was likely to crack, and then of course began the process of disintegration which in the end might make everything fall. A great many men in their designs for reinforced concrete spoke of using working stresses up to 16,000 lb. If that were the working load for which they were designed and afterwards they were tested for 50 per cent. more, they were unconsciously putting a stress of 24,000 lb. upon their bars, and no concrete surrounding a tension bar could help cracking when it got to that load.

Some excellent tests were described in the Papers of the Institution of Civil Engineers a short time ago (vol. 177), and in those cases when the stress got to 20,000 lb. on its tension bars the concrete began to give way. The last speaker therefore was quite right in warning everybody that they must not overload reinforced concrete floors when they were testing them, otherwise they began the process of destruction.

Another point spoken of that night had been rusting in cement. He had known some cases of the rusting of hoop-iron similar to those which had been mentioned, but that had been in brickwork walls. In brick walls built in lime, which at one time used to have hoop-iron put in them, it did rust badly, but he did not think they would find that iron, as far as they knew at present, if

it were well surrounded by Portland cement concrete of reasonable richness, would rust. It was a fact, as mentioned by many gentlemen that night, that rust proper did tend to disappear; for some reason or another it became absorbed. They need not be afraid of any failure from rusting in reinforced concrete if it were properly made, unless it were in those cases where it was used for water tanks in the open. He thought its use for such a purpose was a little risky, and he would certainly like to be able to look ahead for fifty years and see what would happen to such tanks.

In buildings like the one they were in there was no water and therefore no risk of moisture getting down to the iron and then being able to evaporate off, a condition of things which was necessary in order to make iron or steel rust. That was what used to occur in the hoop-iron brick buildings of former days, and he had in his mind a very bad case of failure in that way in the boundary walls of the Liverpool Dock Estate. Something like sixty or seventy years ago the then engineer was smitten by the idea of hoop-iron, which was first introduced by the elder Brunel, and he built the boundary wall along the docks with two rows of hoop-iron in it, each about one-third of the way up. In 1880 that wall, for hundreds of yards along, had two distinct division lines where the rust of the hoop-iron had lifted and parted it. That was brickwork built in lime and was very porous, and it was exposed to bad weather and the spray of the river and it rusted badly, but in Portland cement he did not know any case of rusting unless there had been some damage to the structure.

Another point Mr. Woodward referred to was the L.C.C. Act of last year, and the fire-proof provisions it

contained. In that particular case they would remember there were certain definite rules about the thickness of fire-proof material, but there was one thing the civil engineers introduced which he did not think was always quite understood. In the list of stresses for steel columns, which appeared in the Bill, they had what were considered too low stresses for short columns and too high for long ones, and the engineers persuaded the County Council, while the Bill was in progress, to alter the stresses for steel columns considerably. In the case of a very long column everybody knew that when it began to deflect the line of thrust came over to the side and it would then fail very quickly. With long steel columns in buildings they were liable in case of fire to become unequally heated, and if one began to get out of the vertical the line of thrust came away from the centre line and got nearer one edge, so that the margin of safety in a long column, when the ratio of length to the lowest radius of gyration got up to 150 or so, was not high when a fire got hold of a building. There was no real margin there; therefore in those rules they introduced a scale which ran down in a straight line for a considerable scale of ratios and then came rapidly down to nothing. That meant that in their opinion, after they had got a certain proportion of ratio of length to least radius of gyration it became dangerous and ought not to be allowed at all.

There was one remark made about Portland cement concrete to which he should like to refer. The proportions which Mr. Woodward mentioned could not, he thought, refer to reinforced concrete but to heavy sort of work. In his younger days, in Liverpool, he had known a dock wall which worked out to 17 to 1, but very

large "plums" were then used, and the actual mixings were only 10 to 1. Probably the case referred to in Mr. Woodward's Paper was something of the kind, as otherwise they could hardly have mixed in anything like the proportion claimed by Major Seddon.

Mr. NIXON HORSFIELD, A.R.I.B.A. (Fellow) said that the night appeared to him to be what might be called an "architects' night," and he was very glad that The Institution occasionally held such debates, because they kept up the traditional partnership between architecture and surveying, which was beneficial to both professions. Mr. Woodward, in his history, had brought them up to the present time, and he appreciated how difficult it must have been for him to write that history, the dates being so near to the present compared with ordinary historical dates, but speakers that evening had given them the latest intelligence of the day. He doubted whether the ordinary practice of architecture and surveying would fall in line with that latest intelligence for some little time, and he doubted also whether small work (work which although large as compared with residences, was small as compared with Sir Henry Tanner's Post Office) would be constructed under the reinforced concrete system. He was inclined, although he was not conservative, to lean to Mr. Woodward's view that if they used stanchions and girders encased in concrete, so as to shield them from a fire if one broke out, they could not go far wrong, and they would get a sound job.

If they tried to use the reinforced concrete method of construction on a small scale it seemed to him that they would have to put a lot of "hair pins" carefully in their proper places, and to run the risk of their being

knocked out of those places, with no way of discovering a defect, except perhaps by observing brown stains. That was disconcerting to a man who could not be his own clerk of the works, and he thought for that reason Mr. Woodward's view was particularly sound, and the advice he gave to architects and surveyors particularly good.

Perhaps he might venture upon the artistic side of the question for one moment. Some remarks had been made about the architectural expression of steel and concrete construction, and he was glad that those remarks had been directed to the fact that concrete in itself was not beautiful; it should be cased or covered in some way. Mr. Woodward had referred to the masonry which covered the steelwork of the Tower Bridge, and his view was encouraging to architects. He might take an example of brickwork, which was beautiful compared with concrete. If they looked at the Cathedral in Westminster; while they saw it was a fine building with a wonderful interior, they could not deny that the interior would be all the finer and more wonderful when it was covered with marble, or better still, mosaic. Concrete when covered with marble might be equally fine. Some buildings now in London were treated externally in that way, and he hoped that others would follow. He thought that those present would find a further justification of the principle of a veneer in Mr. Woodward's Paper, for in that Paper he had covered the dry bones of the subject with his own inimitable good humour.

Mr. W. R. DAVIDGE (Fellow) said he would like to join in the appreciative remarks that had been made about the Paper; he thought they must all agree that

the "concrete" facts of the Paper had been very much "reinforced" by Mr. Woodward's own personality, and that they owed him a great deal for bringing to their memories the historical progress the subject had made during the last fifty years. He was not sure that Mr. Woodward was altogether fair to the readers of those Papers and the speakers at those bygone meetings in bringing up their remarks to witness against them without the possibility of their replying. If instead of discussions of fifty years back the author had traced the ferro-concrete buildings actually erected in those days, and told them the results after so many years, it would have been of great practical use, but he thought it was a little dangerous to bring back these bygone discussions because there might have been a misprint fifty years ago, and it was quite possible that a man's sons or his sons' sons might have to suffer for that mistake.

To take one example only, Mr. Woodward quoted Major Seddon's remarks as to a concrete floor which was tested. He said the floor was 13 feet 6 inches by 14 feet 6 inches, quite an ordinary small room, and eighty men were marched on to this small room. It was rather a tight fit evidently for eighty men to get on to a space barely 14 feet square. Then those eighty men were put through a number of evolutions ending up with one final jump. The men in the middle of those eighty must have been very much hampered, and it was hardly a fair thing to give them a final jump and leave them in what was according to the next paragraph a very dangerous position indeed. He had worked out a little calculation and he found that eighty men, if they weighed a hundredweight and a half each would weigh 120 cwts. They had always been instructed that the effect of a live load was double a

dead load, that is to say, that body of men were equivalent to a load of 12 tons, at any rate in the final jump, and yet they were told that the floor sustained that safely and afterwards gave way under a dead weight of $10\frac{1}{2}$ tons. There was something evidently wrong with their knowledge of live loads if those figures were accurate.

In quoting ancient history he had rather anticipated that Mr. Woodward would quote Fitz-Stephen's account of London, written in Norman times, when he said London was particularly unfortunate in that it suffered from two pests, one was "the frequency of fires," and the other "the immoderate drinking of fools."

They must all agree with the remarks that had fallen from Sir Henry Tanner and others as to the great necessity for careful supervision of reinforced concrete work, particularly in the smaller jobs, as there was a growing tendency on the part of experimenting builders to use this new material. Only recently he had found a case where a builder was introducing reinforced rods, and the concrete was being so rammed underneath the rods that the latter were forced right into the centre of the beam so as to be absolutely useless. That was only one case in many which might arise unless proper supervision were obtained.

He had hoped that a Paper dealing with the evolution of fire-resisting construction would also have dealt with other subjects besides floors. The London Building Acts gave a schedule of many fire-resisting materials besides floors and walls, but in addition to that there was another section (Section 73) of the London Building Act, 1894, which for some reason or other required that all projections from a building should be fire proof—it did not say fire resisting but "fire proof." That was an obvious

inconsistency in the Act which needed a little amendment when the next one was drafted. He would also have liked to have heard Mr. Woodward's opinion on some of the materials which were occasionally said to be fire resisting, for instance, sheet-iron, nailed or otherwise, fixed to ordinary matchboard partitions. It seemed to him that such a partition could never be satisfactory as a fire-resisting material; it was quite evident that no matter which side the fire attacked the partition the whole thing would burst into flame as soon as the heat reached the matchboarding. There were other sections of the Act which were also capable of being argued about, for instance, the one dealing with incombustible materials, which were required for roof coverings. It seemed an obvious inconsistency that a material such as lead or zinc should be regarded as incombustible, when they all knew that on the application of fire to any of those materials they would start running in a very short time.

He wished to join in the expressions of appreciation of Mr. Woodward's excellent Paper.

The vote of thanks having been put by the Chairman and carried unanimously—

Mr. WOODWARD, in reply, said he had fortunately a few minutes which he could occupy very well in replying to the good-natured discussion which had taken place on his Paper. He was now particularly "reinforced," he did not say physically but mentally. He had expected, and he had told one or two of his friends who were there that evening that he had expected, considerable adverse criticism, but the discussion had taken a very good-natured form, and he had certainly nothing to complain of.

His only desire in writing the Paper was to invite a discussion which might make the public acquainted with that most important invention, if he might so call it, of reinforced concrete, a notable example of which, among many others in London, was that magnificent building the New Post Office in Newgate Street, erected from the designs of Sir Henry Tanner. He had known Sir Henry Tanner for thirty or forty years, and he knew that a more careful man than he did not exist in the profession of architecture, and, therefore, throughout his Paper, whatever doubts he might have he put down to his own conservatism, and to, he would not say the creeping on of old age, but something like that. One got into a groove, a certain form of construction of which one knew the result, and did not like to move from it, but he congratulated all those men who had had the courage (because it did require courage) to employ this material which had had such a marvellous effect upon the construction of buildings, particularly in obtaining large unsupported areas.

With regard to the German and Belgian cement he remembered perfectly well years ago Portland cement was coming into this country in very large quantities, with the sacks labelled "Portland Cement." Those were passed by the British Customs, and the cement was used in this country; it was cheap but it was certainly nasty, and disastrous results of its use would some day or other show themselves. Mr. Northcroft very properly said, if they were going to use this reinforced concrete and no doubt it would be used very largely, a very important point was to see that they got the best material. He thanked Sir Henry Tanner for what he had said, and as he had already predicted, he was certain that that magnificent building, the Post

Office, would be the pioneer of many other similar buildings in this and other countries.

Mr. Northcroft referred to solid wood floors. He certainly believed, although they were more expensive than reinforced concrete, that they were the finest floors possible, and they could not be burnt. His friend Mr. Max Clarke, who was present, had made experiments with this close wood floor, and had found that it was almost impossible to burn; therefore apart from cost he thought it was one of the finest floors ever used for resisting fire. Mr. Northcroft had spoken about rust and hoop-iron. In his young days in building they never built a brick wall without hoop-iron bond, and Mr. Northcroft knew that the specification was "one line of hoop-iron bond to each half-brick in thickness of the wall"; it was as familiar to them as their prayers.

Then as regards his friend Mr. P'Anson it was satisfactory to hear the son speaking with reference to Papers read by his dear father fifty years ago. He referred to rough cast and how to deal externally in an artistic manner with the concrete. Sgraffito was one mode of dealing with concrete, but he thought they would all agree with Mr. Horsfield that for artistic purposes it was almost impossible to deal with concrete as an external finished piece of architecture.

Mr. Phillips Fletcher had given them an interesting and valuable addition to the Paper, an addition which would be read very carefully, he was sure, and appreciated by every Member of that and other institutions. He spoke of "floating in" cement. That was important, for if, as was the case, a greater proportion of the cement than was right occasionally found its way to some part of the work, with the result that another part suffered, that tendency might be counteracted where they could afford to use plenty of water. Its use would make

concrete much more homogeneous than it otherwise would be. The difficulty was that to-day they had to finish their buildings so quickly that there was no opportunity for the drying of the floors, and that was particularly so in commercial buildings.

Mr. Hudleston had given them some useful information as an engineer, and he was glad to have had an engineer take part in the discussion. He spoke of hoop-iron and rusting, which were matters of great importance. He said, very truly, hoop-iron was only used in brickwork, and the use of hoop-iron was certainly disappearing. He referred to concrete water tanks being risky, and also to the Building Act of last year, and what he said with reference to long columns would be read with great care by Members of The Institution.

Mr. Horsfield was very kind in his remarks referring to the dates of buildings, and, principally from the artistic standpoint, he was of opinion that concrete was not suitable, and had referred to Westminster Cathedral. He (the author) was sure, although they must greatly admire the splendid brickwork of that Cathedral, they would all be happy to see it covered over with marble or mosaic instead of what they now saw.

Mr. Davidge also spoke of concrete, and referred to Mr. Seddon's remarks about the floor, and the number of soldiers on it. He was not responsible for what Mr. Seddon said; whether the soldiers were there, whether they all got on the floor at one time, or whether they marched through the room like they did on a stage for theatrical purposes, he did not know.

He was greatly obliged to the Meeting for having listened to his Paper, and to those who had taken part in the discussion.

The Meeting then adjourned.

BEET SUGAR : CAN IT BE MADE PROFITABLY IN GREAT BRITAIN ?

BY F. J. LLOYD, F.C.S., F.I.C.

*[Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION held on Monday, 20th February, 1911.]*

LESLIE ROBERT VIGERS (President) in the Chair.

The time at my disposal is short, and the subject which we have to consider large and highly complicated. Hence I must omit much which might be said with advantage, and concentrate your attention on certain fundamental principles.

The discovery by Marggraf that beetroots contained sugar similar to the cane was made in the middle of the eighteenth century, and this fact was first utilised at the commencement of the nineteenth century, when Ashard started a factory near Breslau, in Silesia. Hence the name, Silesian sugar beet.

The sugar beet is in appearance a white root, very much like a parsnip. The best forms are spindle-shaped, and not too long. Unlike mangels, which grow partly above ground, the sugar beet grows entirely in the soil, and the part above is not of use to the sugar manu-

facturer, and has to be trimmed off. The root has numerous rootlets, which cling to the soil, so that the uplifting and cleaning of the crop is a difficult and expensive operation, and one which cannot easily be done by machinery, but needs hand and spade work.

The cultivation of the beet is similar in the main to that of the mangel-wurzel. The land is ploughed deeply in the autumn, and if farm-yard manure is used it is applied then. In the spring it is harrowed, cultivated, weeded, and rolled.

The seed is planted by hand (dibbling) or drilled, 25 lb. to the acre. Sowing takes place during the month of April or early part of May. The plants are subsequently thinned out.

Manures are applied partly at the time of sowing, and also as top dressings, to push on the growth of the young plants.

The roots begin to ripen according to the time of sowing, early in September, and are pulled from about the middle of September onwards. From 14 to 16 tons per acre is a good yield.

Beets take from the soil in a 12-ton crop the following constituents in lbs.: N. 40·5, $P_2 O_5$ 27·0, $K_2 O$ 94·5, Ca O 183·6, Mg O 18·9 (S. Stein in Standard Cyclo. Ag.).

The improvement of the beetroot as a source of sugar is one of the most striking illustrations of the successful applications of science to an industrial pursuit. In the early days of beet production the roots contained about 10 per cent. of sugar. To-day the sugar averages about 14 to 15, while it sometimes rises to 18 or 20. This is due to "selection" in the production of seed. All the English experiments on sugar beet have been made with the very best seed. How far such

seed could be obtained if the industry were started on a commercial scale has not been considered.

It is estimated that for the commercial production of sugar an acre of land should yield roots containing two tons of sugar. The following table shows what quantity of roots would yield this:—

Percentage of Sugar in roots.	Tons roots which contain two tons Sugar.
12	16·7
13	15·4
14	14·3
15	13·3
16	12·5
17	11·8

In view of these figures I would suggest that if ever the industry is started in England the farmer should be paid for his roots at per ton of sugar contained.

THE MANUFACTURE OF SUGAR.

As I must not assume that you are all acquainted with the process of manufacture of sugar it is necessary to give a very brief description of the process, sufficient to explain words subsequently used.

The roots after being scrupulously cleaned are “sliced” and packed into cylinders, which are then filled with warm water. The water extracts, say, half the sugar from the roots; it is then drawn off; the cylinder is refilled with water, which again extracts half the remaining sugar and is likewise withdrawn. The slices would now contain only a quarter of the original sugar. Subsequent extractions would reduce it to 1-8th, 1-16th, 1-32nd, 1-64th, &c. Finally the slices, exhausted of sugar, are removed and dried, and constitute what are termed “dried slices.” The extract waters pass from

cylinder to cylinder, each time meeting with fresh pulp, and finally they contain almost as much sugar as the roots under treatment. The liquid has then to be concentrated and purified, and for the latter purpose lime is added, which causes a precipitate of much of the impurity, while finally most of the lime is itself precipitated by means of carbonic acid. To purify the juice from these precipitates it is filtered, and the lime, &c., remain in the filter in the form of cakes or thick slime. This constitutes the lime refuse of the factory. The purified juice is concentrated until the sugar crystallises out. That portion of the concentrated juice which will not crystallise is called molasses. It constitutes about 7 per cent. of the total product, and contains about 50 per cent. sugar. The crystallised sugar is known as 88 per cent. beet sugar. By special treatment it may be converted into either granulated, loaf, or other well-known forms of sugar,

THE FINANCIAL PROBLEM.

Some people seem to think that the only question to decide is: Can we grow sugar beet in England? That question was settled in the affirmative years ago. Granted, then, that we can grow sugar beets, the questions arise what yield per acre and what percentage of sugar may be obtained. These questions, however, could only be answered by years of experience. No single experiment, no group of experiments, in one year, or even two years, could answer this question. Much less could the farmer estimate from such experiments what might be the average cost of cultivation for an extensive area or the average yield per acre under such conditions. Hence most of what has been written

about sugar beet cultivation in England has been mere speculation.

Now it is perfectly evident that whether we can profitably grow sugar beet or not is intimately dependent on whether a beet-sugar factory would be a profitable commercial undertaking in this country, and, if so, under what conditions. If this cannot be definitely settled to the satisfaction of the financier, there is an end to the agricultural side of beetroot growing. For beetroots as a food for cattle cannot compete with mangels, and the amount which might be grown for exportation is so limited that it would become a merely local rather than a national industry.

We must then in the first place boldly face the financial aspect of this question. It may be laid down as an axiom that the success of a factory depends upon three factors: the price of the manufactured article, the cost of manufacture, and the cost of the raw material. The cost of manufacture in any given enterprise is the factor least liable to fluctuation. If therefore the price of the manufactured article is liable to fluctuations, so also must be the cost of the raw material. Otherwise this must be fixed at a constant price based on the average lowest prices of the product. If not, then it is perfectly evident that in some years the factory would be run at a loss, and a series of such years would spell bankruptcy. For any undertaking to promise the producer of the raw material in advance for a series of years a price above what the lowest average of the manufactured article would permit would necessarily be to tempt failure.

There is yet another consideration, which is really of primary importance when considering the financial aspect of an industrial pursuit. Capital is necessary,

and before this capital can be obtained the capitalist will ask two very pertinent questions: First—What security have I that my capital will not be lost? and secondly, What interest will you guarantee me, or at least give me reasonable grounds to anticipate? It is a remarkable fact that in all the speeches made and articles written on this beet sugar question there has never yet been a satisfactory treatment of these fundamental questions. What security is there for the capital invested? A large portion of it would be sunk in buildings utterly useless for any other purpose than as a sugar factory; and were the undertaking to prove a failure that money would be lost. The Government has been asked to assist the industry for five years. What use is that? Who would invest capital on a chance that at the end of five years it would be lost. Another large portion of the capital would have to be invested in machinery. But machinery does not last for ever, and even supposing we give it a life of twenty years, at the end of that time the capital will be lost unless there has annually been put aside a sum equivalent to the annual depreciation. Such sum can not in any sense be looked upon as annual expenditure on manufacture. It would be what I should term a sinking fund to replenish loss of capital. If you will assume that the whole of the capital has been lent for a definite period of years, at the end of which it has to be returned, you will perhaps better realise the necessity of this sinking fund. A considerable portion of the capital will be invested outside the actual factory, in means for receiving the roots, storing them and washing them, also in appliances for disposing of the refuse of the factory, a very serious problem to which I shall revert. Evidently all this capital is lost if the factory fails.

Let us then examine the financial position in other countries, remembering that the average price of beet sugar is about £10 a ton.

That recognised authority on sugar, Mr. Geo. Martineau, C.B., in his interesting little book on "Sugar" says (p. 107): "In the most advanced beetroot country, Germany, the *average* cost of production is about 9s. to 9s. 6d. per cwt." The cost of production, so far as I can ascertain, in all other countries is higher than this. How then can we hope to make sugar production a profitable industry in England until the price of sugar has permanently risen far above that at which it now stands. Some people think it will rise. Judging from the rapid development which is taking place in the cane sugar industry in various countries I doubt it. That the price will fluctuate with seasons of scarcity or excess is certain, but it would be most unwise to build up a new industry on such a shifting-sand foundation.

Let us pass to the United States where for many years the Government has done everything in its power to foster the beet-sugar industry. For no pursuit has the Department of Agriculture been more anxious, while its chief chemist, Dr. Wiley, has contributed year after year since 1890 most valuable reports to advise those engaged in the industry. Every factory but one started in the United States prior to 1890 has failed. Those who would start a factory in England might do worse than study the causes of these failures before they themselves made the same blunders.

To-day, however, there are 63 factories in the United States, and the following figures relating thereto and taken from a Congress Document No. 523, May, 1908, are of interest:—

AMERICAN BEET-SUGAR INDUSTRY, 1906.

Number of factories	63
Capital invested	\$91,037,500
Tons of sugar produced	483,612
Value of product	\$43,543,000
\$	
Paid to farmers for beets	22,027,000
" factory mechanics and labourers	5,825,760
" to superintendents and clerks	1,293,200
" to officers	619,000
Paid for coal and fuel oil	2,516,800
" coke	1,780,800
" lime-rock	678,400
" cooperage and bags	848,000
" freight on beets	1,967,000
Total expenditure above enumerated ...	37,555,960

NOTE.—Mill and miscellaneous supplies, repairs and new machinery are not included in above.

From this table we find by deducting the expenses from the value of the product that the

balance is \$5,987,040

If we deduct 4 per cent. of capital as

sinking fund \$3,641,500

We have left \$2,345,540

which on a capital of over 91 million dollars practically represents $2\frac{1}{2}$ per cent. interest. It really does not amount to so much in view of the note that repairs and new machinery are not included. Further, if you divide the value of the product by the tons of sugar produced, it will be seen that the sugar was valued at \$90 a ton, or £18. This is due to the fact that there is a duty on sugar of over £7 to the ton.

In spite of this high price of sugar, and the small amount of interest which the capital brings in, the farmer is only paid "on an average \$5 a ton," "though

“ some factories have been paying as much as \$5.50 per ton for several years.” This price (20s. to 22s. per ton) seems perhaps high. We shall see.

In spite of these conditions two facts are strikingly brought home to the student of the beet-sugar industry in the United States. First, that the factories have a difficulty in making both ends meet, and, secondly, that those which succeed find it difficult to obtain the necessary supply of roots.

These assertions are well illustrated in a Senate Document No. 22, of 1909, where we read : “ During the six years (1896-1901) forty-one factories were put in operation, of which seventeen failed later.” “ During the seven years (1902-1908) two of the forty factories completed and operated failed later.”

In support of the second assertion this same Document states that : “ The serious problems facing the beet-sugar industry to-day are not those of soil and climate. These may be considered settled in favour of the industry. The real problems now to be solved are economic. The main questions are: (1) How to secure a satisfactory supply of labour for growing beets; (2) How to maintain and extend beet culture in competition with farm crops.”

Every word in this sentence would apply to, and might have been written with regard to the proposed introduction of the beet-sugar industry into this country.

In view of these facts one is puzzled to know on what grounds financiers are asked to invest capital in this undertaking of beet-sugar production. I fail to obtain a businesslike financial prospectus which would carry conviction as to the profit likely to accrue. As an illustration of the schemes put forward, let me take

one from a Paper by Mr. J. Saxon Mills in *The Fortnightly Review* for November, 1910. To show "the financial prospects for the investor," he gives, quoting Dr. Schack-Sommer, "an estimated balance of receipt and expenditure" for a factory to deal with 34,000 tons of roots, the produce of 2,000 acres at 17 tons per acre.

These are the figures :—

RECEIPTS.	£	s.	d.	EXPENDITURE.	£	s.	d.
3,604 tons granulated sugar at £12 ...	43,248	0	0	34,000 tons beet delivered to factory at 17s. 6d. per ton ...	29,750	0	0
3,740 tons slices at £5 10s. per ton ...	20,570	0	0	Manufacturing and other expenses at 7s. 6d. per ton ...	12,750	0	0
272 tons molasses at £3 15s. per ton ...	1,020	0	0	Depreciation 10 per cent. on machinery	5,890	0	0
				Depreciation 5 per cent. on buildings and constructional ironwork ...	1,472	10	0
				Balance for profit ...	14,975	10	0
	<u>£64,838</u>	<u>0</u>	<u>0</u>		<u>£64,838</u>	<u>0</u>	<u>0</u>

Let us examine these figures first on the expenditure side.

1. The farmer is to be paid 17s. 6d. a ton for the roots. Will he be satisfied? I think not, in view of the facts which I propose to put before you and others which have recently been gathered in connection with the cultivation of beets in East Anglia, the results of which experiments have been most fully described in an admirable series of articles in *The Field*, which will, I hope, be reprinted in pamphlet form, and carefully studied by all who are interested in this question.

2. The manufacturing expenses are those of the best

factory work and represent £3 10s. per ton of granulated sugar produced.

3. The estimated expenditure appears to be—

	£
On machinery	58,900
On buildings, &c.	29,450
Total	£88,350

Nothing is said of the working capital required. We may estimate this at £30,000, making a total capital of £120,000.

Passing now to the receipts side. If we wanted to carp we might criticise the £12 per ton credited for granulated sugar as too high; let this pass, however. The price of the molasses we must protest against. This is only suitable for cattle feeding, and contains nothing of value save its 50 per cent. sugar. A fair price would be 50s. a ton, an outside price £3.

But by far the most important item is the value attributed to the dried slices. It will at once be seen that all the profit and more than the profit depends upon the assumed value of these dried residues as food for stock. In fact, according to this balance sheet, it is almost as much a cattle food industry as a sugar industry. While there can be no doubt that the consumption and demand for sugar by man is great and increasing, there is no reason to suppose that any demand exists or is likely to exist for this residual cattle food. Moreover, the figures here given will not bear investigation. Claassen, one of the greatest authorities on beet sugar, says that the dried slices represent about 6 per cent. of the roots employed. Instead, then, of 3,740 tons there would be only 2,040 tons available.

Newlands gives the composition of the dried pulp as follows :—

Water	...	...	...	12.85
Fat	...	...	...	.64
Albuminoids	...	...	...	7.34
Carbohydrates	...	...	...	56.61
Cellulose (fibre)	...	...	...	16.73
Mineral matter	...	...	...	5.83
				<u>100.00</u>

This is just the kind of artificial food for which the English farmer has least need. It is poor in oil and in albuminoids, and its chief feeding value lies in the carbohydrates. But these are the constituents most easily obtained in farm crops and cheap foods. They would be still more easily obtained if the molasses of these sugar factories were also placed on the market in the form of cattle food as it is necessary they should be. I estimate that £4 a ton would be fully as much as the farmer would be justified in paying for this material. We must also take into consideration that the English farmer has had no experience in its use, and will take some time to learn how to use it to advantage.

The 2,040 tons at £4 a ton would represent only £8,160, instead of the £20,570 in the estimate under consideration.

The balance of profit would thus be reduced from about £15,000 to under £3,000, which would not afford much interest on the £120,000 invested.

Apart from these details, and on general principles, it must be universally recognised that a manufacturing industry which depends for the whole of its profit, and even some of its expenses, on the sale of a by-product, is not financially sound.

I would like to suggest for your consideration another method of estimating the financial position :—

ESTIMATE OF BEET-SUGAR FACTORY.

Capital ... £100,000.							£
Invested in machinery	...	...	...	...	...	...	50,000
Invested in buildings	...	...	...	...	...	...	25,000
<i>Receipts.</i>							
5,000 tons 88 per cent. sugar at £10 per ton	...	...	...	...	...	...	50,000
2,000 tons dried slices at £4 per ton	...	...	...	...	...	...	8,000
350 tons molasses at 50s. per ton	...	...	...	...	...	...	825
Income							£58,825
<i>Expenses.</i>							
Interest on £100,000 at 4 per cent.	...	...	...	...	...	...	£4,000
Sinking fund 10 per cent. on machinery	...	...	...	...	...	...	5,000
Sinking fund 5 per cent. on buildings	...	...	...	...	...	...	1,250
Cost of manufacture at £3 a ton	...	...	...	...	...	...	15,000
							25,250
Leaving for roots	...	...	...	...	...	...	33,575

Roots required :—

If containing 13 per cent. sugar	...	40,000 tons at 16s. 9d. per ton.
" 15 " " "	...	35,000 " 19s. "
" 17 " " "	...	30,000 " 22s. 4d. "

Assuming that the capital invested is sufficient, on which point there may be some doubt, the only question which remains is, Would it pay the farmer ?

Before discussing this there is, however, one subject I should like to mention briefly.

THE POSITION OF THE FACTORY.

Success in beet-sugar production depends largely on the site of the factory. An abundant supply of water is the primary requisite. It is stated by Lichowitzer* that the amount of water used by a factory is eleven

* Quoted by Stift-Gredinger, p. 259.

times the weight of roots used, so that a factory dealing with 35,000 tons of roots uses 86,000,000 gallons of water. This is probably the minimum intake.

Having been used the waste water has next to be disposed of, and being now highly contaminated with waste material, and therefore liable to undergo fermentation, considerable expense is involved in its treatment, but as soon as possible it is turned into the stream to flow to the sea.

The grosser refuse is allowed to settle in tanks and removed by sieves, but even then, says Claassen (p. 95), the partly purified waste waters "though not injurious" to man or animals, make the stream into which they "flow unfit for use, owing to their bad smell and taste, and frequently kill the fish owing to the evolution of "sulphurated hydrogen gas." Evidently the evil effect of this waste water must depend upon the volume and flow of the stream. But I have never seen any notice of this all-important consideration, and any factory built without due regard to it would soon be involved in legal difficulties with riparian owners.

THE SUBJECT FROM THE FARMERS' POINT OF VIEW.

The question still remains, Would it pay the farmer to grow beetroots? It has been suggested that the farmer would gain three advantages from this industry—

First.—A price per ton for his beet crop which would afford a large profit on cost of production.

Second.—A new source of cattle food from the dried slices and molasses.

Third.—The lime cakes made in the purification of the juice.

The last item we may at once dismiss as imaginary. A beet-sugar factory must be in a position where it can obtain lime reasonably. If a farmer in the neighbourhood wanted lime it would probably pay him better to use it fresh than to cart or carry these wet cakes to his farm, dry them, pulverise them, and then apply to the land.

Years ago a similar claim was put forward for the lime cakes of sewage sludge. Farmers soon found they were not worth the cost of carriage.

Of the dried slices I have already spoken. Their true value is problematical, that they may have an inflated value in large sugar-producing centres is possible. Why? We shall see later on.

The English farmer, then, must consider the first advantage only.

We have as yet no experience in England which enables us to say for certain whether the crop could be produced so as to afford a large profit or not.

That sugar beets can be grown in England of as good quality as those produced on the Continent we do know. What would be the average yield per acre on a series of years when grown in large quantities we do not know. English soil is practically virgin soil so far as the sugar beet is concerned, the labour demanded by the crop, more especially in keeping it clean, may be easily found for a few experimental acres. But to obtain this labour for some 2,000 or 3,000 acres situate within a circle of five to seven miles radius is quite another matter. A similar labour difficulty arises in the autumn when the crop has to be gathered and taken to the factory, not as the farmer finds convenient but as the factory wills it. Then again, the crop is one peculiarly susceptible to climatic conditions both as regards yield

of roots and contents of sugar, and we know how treacherous our climate is. A striking illustration of how intricate this question of climate is may be gathered from the following facts. Considering what good crops of beets had been grown in our temperate climate last year, I ventured to ask Professor Wiley why the beet zone or belt in the United States was confined to so high a temperature district. His reply was that if extended there would be a chance of early autumn frosts damaging the roots. We may in England be safe on this ground, but what about late spring frosts which easily destroy the young plants. One author goes so far as to say that in such case the land must be cleaned and replanted at once. Lastly, the beet crop is liable to very many diseases and pests. This should be particularly noted, for it has been stated by those who are tempting farmers to take up this culture, that the crop is one peculiarly free from disease and injurious insects.

Taking all these factors into consideration, I venture to think that the results of our experiments are no criterion whatever of what we might legitimately anticipate as an average crop over a series of years. But we do know what has been the average crop in France and Germany, grown by men who have been born and bred to the industry, and who are quite as ready to combine science and practice as are our English farmers. I cannot help thinking it is a little bit of John Bull's conceit to suppose that he could do much better.

Probably the main cause of this mistaken notion is due to the fact that our yields of beet have been recorded in a very rough-and-ready way while the Continental yields are of roots as paid for by the factory.

Very few Englishmen have any idea of the great weight of damp earth which will cling to a beetroot.

The factory cannot afford to pay for this. Cannot even afford to go to the cost of cleaning dirty roots. The roots must be sent to them as clean as possible. Even then by the time they have been scrupulously washed, all the rootlets removed, and the head cut off down to the ground line, they weigh far less than the farmer would imagine. But this is the weight which the factory pays for, and which indicates the true Continental yield. The writer of the articles in *The Field* has given most valuable information to English farmers on this point, and he is the first to have drawn their attention to this important consideration. It would appear that the factory weight has in some cases been only half the farmer's estimated weight. This is not surprising. Those who have studied the conditions of the industry abroad know that one of the greatest difficulties has always been this difference between the farmer's estimated yield and the sugar factory's return of actual yield of washed roots.

I am certain that here in England it would cause many farmers deeply to regret they had ever entered into a contract with the factory; and if any English farmer should take up this culture in the fond belief that he can obtain crops far in excess of his Continental confrères I fear that he will be doomed to sad disappointment.

The average yield of beetroots on the Continent is from 12 to 14 tons per acre. I do not think the English farmer can reasonably expect to obtain a larger crop. At what price he could afford to sell the roots must depend in the first place on the distance of his farm from the factory and the cost of carrying the roots to the factory. This may be comparatively small for the man in close proximity, but for the grower whose farm

is situate over two miles from the factory it must be a serious consideration. Supposing that the total cost of carriage, including men, horses, train or boat, is 1s. a ton per mile, we may make the following calculation on a 13-ton factory yield per acre. Roots as sent from farm would weigh, say, 15 tons, and cartage cost 30s.

Price paid by factory at 17s. 6d.

per ton on 13 tons	...	...	£11	7	6
Carriage	...	...	1	10	0
			<u>£9 17 6</u>		

What farmer would be satisfied with that price?

The fact is that 17s. 6d. a ton for beets may look very tempting on paper. In practice it will not do. Even if we assume that the farmer gets 20s. a ton or £13 per acre for his crop, and that its carriage to the factory costs him 30s., thus leaving £11 10s. per acre for the crop, I doubt whether taking all things into consideration it would pay him.

An able Paper on the cultivation of the sugar beet, which appeared in the *Board of Agriculture Journal* for January, gives the cost of producing a ton of sugar beet in Germany.

Taking the average from 1893 to 1898 on ninety-eight farms it was found that the cost per ton was—

On 15 of the farms,	16s. 6d. to 18s. 6d.
On 25	„ 18s. 6d. to 20s. 6d.
On 22	„ 20s. 6d. to 22s. 6d.

But what becomes of the factory profit in Mr. Saxon Mills' estimate if instead of 17s. 6d. they have to pay 20s. a ton for the roots, and instead of obtaining their raw material for £29,750 have to pay £34,000 for it?

The truth of the matter is, that in England we are

between Scylla and Charybdis so far as beet-sugar production is concerned. On the one hand a price which would satisfy the farmer for the roots would be prohibitive for a factory, so long as the average price of sugar remains what it has been for some years past. On the other hand, if the factory only paid for its raw material a sum which would permit a small interest on the invested capital, the production of that raw material would entail a loss on the farmer.

THE EFFECT ON OUR SYSTEM OF AGRICULTURE.

The production of beets in quantities sufficient to maintain a factory does not merely affect one crop grown by a farmer, it materially changes the whole system of farming. As a rule the ordinary root crops, mangels or swedes, are abandoned, and this again influences the live stock of the farm. As Mr. Mason says: "In the economy of the farm it would mean the abandonment of sheep farming, different rotation of crops, an increased head of stock—cattle—to eat the pulp . . . and that we should have generally to adopt methods which the English farmer under present conditions is quite unable to do."

What its effect on dairying would be we can easily imagine, for no one will suppose that the dried exhaust slices could ever take the place of roots for dairy cattle. But in a country given up to sugar production, where roots cannot be obtained, the farmer is compelled to fall back upon the dried slices as the best substitute available. Hence presumably the high price at which they seem to be valued in such countries—a price which they would, however, never obtain in this country. Is it then worth while to decrease our most profitable stock,

and probably deteriorate those which are retained merely for the sake of introducing a new and doubtful industry?

This is not the only change which would be involved. Even Mr. Saxon Mills recognises that it would also involve many vast and serious changes. "We should have to offer high wages to the labourer, and to provide him with new and suitable housing." But he does not solve the problem of where the money is to come from, nor what effect these changes would have in increasing the cost of production of the roots and diminishing the profits to be derived from the industry.

For any country to try and completely revolutionise its agriculture by the introduction of a new industry—the profits from which are extremely problematical, which would have to compete with a similar industry in numerous other countries, and with a closely allied industry on which its own colonies partly depended and which in other countries was making rapid progress—seems to me the height of folly. When the subject was mooted some time ago at the Chamber of Agriculture, I expressed the opinion that it would prove a failure and a farce. Subsequent very careful re-study of the whole question and of all the newest information thereon has strengthened rather than shaken that opinion.

Mr. W. ANKER SIMMONS (Fellow) said it was with much pleasure that he had accepted the invitation to come that afternoon to move a vote of thanks to Professor Lloyd for the excellent Paper which they had just listened to.

It certainly was most desirable, when any new scheme was brought before them for consideration, that men should be found who were not afraid to put the drag upon

the coach, and point out disadvantages in such a way as to cause business men to think seriously before they pledged themselves either one way or the other. In looking at the sugar question there was a vast difference between the opinions which emanated from gentlemen interested in the sale of artificial manures calculated to be good for beet and those expressed in the Paper which had just been read, but it seemed to him necessary for them to hear both sides—the extreme side if they liked (and he confessed his friend was rather a Jeremiah on the subject)—before coming to any definite conclusion.

Professor Lloyd and himself had been brought up in two very different schools. The former was a man of science, and he (the speaker) was what might be called a practical farmer, who unfortunately had not received as much scientific instruction as he would have liked. He therefore proposed, in the remarks he was about to make, to put forward a few suggestions from the practical standpoint.

He quite recognised that the production of sugar beet in this country could not possibly be carried out unless the man who was going to provide the necessary capital for machinery and buildings was satisfied that there was a fair chance of obtaining a return for his capital; but that was not the only difficulty, as the capitalist when found had to arrive at an agreement with the farmer, because they were very much in the same position as the man who blew the organ and the man who played it. The capitalist was no good without the farmer, and the farmer was no good without the capitalist. They would have great difficulty in convincing the farmer that in advocating the growth of sugar beet they were putting before him a scheme which

was likely to be an improvement in the long run for him, or his pocket, or for the land he farmed.

The beet must be grown within a limited area of the factory, and if grown beyond, say, a four-miles radius, it seemed hopeless to do it profitably. Professor Lloyd had put the radius at from five to seven miles, but that, he thought, was too wide. It would be necessary, therefore, in order to obtain a reasonable chance of success, to get agreements with farmers who would undertake to grow not less than 2,000 acres of beet within a radius of four or five miles. What did that mean? It meant that they would upset the particular industry of that neighbourhood altogether. They could not possibly take 2,000 acres in a limited area like that for a limited purpose without altogether altering what had hitherto obtained, and he was certain they would never get either a good milk producer or a good corn grower to give that up for beet growing. He was equally certain that there would be no chance of getting a successful potato farmer to change to beet growing, and it seemed to him that there were very few districts in this country where there would be a reasonable chance of getting the farmer to enter into an agreement such as that suggested.

Professor Lloyd had reminded them that the capitalist would want a guarantee for his money, and had rather scoffed at the utility of only a five-years guarantee by the Government; but if it was a difficult thing to obtain even five years' guarantee for the capitalist, how much more difficult it would be to get a body of farmers to tie themselves down to grow this crop for even three years. For that reason he himself did not see much chance of sugar beet growing being generally adopted in this country.

Then again, he could not help looking at the matter

from the capitalist's point of view in two ways. First, there was the hypothetical balance sheet. He took no notice of that, it reminded him of the Lancashire valuer who said he could "‘vally’ high, or he could ‘vally’ low, ‘or he could ‘vally’ for probate." A man when he was going to draw a hypothetical balance sheet drew it for what he wanted it to prove, and he could make it show a profit or a loss; he would prefer to take the actual balance sheet which came from the official figures of the United States factories, and according to that there did not appear to be quite that gold mine in the production of beet sugar which certain people would rather lead them to believe. The other was still more serious. Supposing for a moment the progress of growing sugar beet became so general in this country as to become a great industry in our midst, and that of necessity it interfered with the supply of sugar between this country and Germany, then Germany would protect the beet growers there, and they would knock down the price here in such a way as to make it not pay to grow. They were in no position to retaliate. They had nothing to bargain with. Germany had done this with other things, and would do it in that case to a certainty, and he could not believe that there would be many men in this country prepared to advance a large sum of money at such a risk, for it would be entirely in the hands of the German Government so to regulate prices as to starve the industry and shut down the factories in this country; and if they were once shut down they would never be re-opened, for capitalists would know that the process could be repeated.

There were one or two points he should like a little instruction upon from Professor Lloyd or from those who might succeed him in the discussion. Personally he had never grown sugar beet, but he induced a friend near

him to grow one acre as an experiment, and after carefully washing and weighing the crop they found it produced 14 tons to the acre, which seemed quite satisfactory; but they had no idea of the trouble it was to get that crop, and to wash it and get the soil away from the roots. As they knew, the least touch would cause the red beet to bleed, and they found it the same with the white sugar beet. Naturally in bleeding the beets lost the constituents most necessary to be preserved, and the labour therefore in the growing and harvesting it was a very different thing to the harvesting of a mangel crop.

Then what effect had the growing of a crop of sugar beet on the soil? He had known mangel after mangel grown for twenty years, and the soil had shown no deterioration whatever; but they also knew equally well that if one wanted to do an incomer a bad turn they could do so by growing carrots, because nothing would grow after carrots, and he would like to know if that was so with sugar beet. Even if they did not grow mangel after mangel they could grow some of the best wheat after that crop, but if beets were exhaustive they could not grow anything after them until they had put a certain amount of heart into the soil again. That was a very serious consideration. Again, it appealed to him that whereas a crop of mangel was a source of profit in many ways, for they got back from the consumption of the mangel a vast amount of manure, the beet was a crop which was taken clean away from the land altogether and left nothing behind it. That was a practical point of view for a farmer to regard it from.

The time for harvesting in September was not at all convenient. If it were late, the harvesting of the beet and corn would run together and if it were a normal

harvest then when they were getting their wheat land ready for the next year they would be compelled to have "all hands to the pumps" to get the beet up before there was a chance of autumn frost, and as they knew severe frost sometimes came early in October.

Had the beet to be delivered to the factory within a specified time or might it go for some months? It might be much affected by frost and much care would have to be taken in sending it on to the factory, all of which added to the expense of the crop.

The last point he would refer to was to his mind the most important of all, and that was the one quoted on page 337 from the opinion of Mr. Mason: "In the economy of the farm it would mean the abandonment of sheep farming, different rotation of crops, an increased head of stock—cattle—to eat the pulp . . . and that we should generally have to adopt methods which the English farmer under present conditions is quite unable to do." He could not agree with Mr. Mason that it would lead to an increase in the head of stock. He was much afraid that the growth of beet would be to discourage the raising of live stock. There was nothing so important to the farming industry of this country as an improvement and an increase in stock raising; for whatever competition they might have from other countries in other respects there was no competition as to their live stock, which was the finest on the face of the globe, and anything that would tend to the reduction of cattle either in number or quality would be highly undesirable.

He thanked the author for his note of warning, and would ask farmers to think over the step carefully before they pledged themselves to anything like a general system for the growth of sugar beet.

Mr. STANLEY HICKS (Professional Associate of Council) said he had much pleasure in seconding the vote of thanks to Professor Lloyd for the very interesting Paper he had read that afternoon, and further he would like to say he fully endorsed the remarks made by Mr. Simmons, and desired to thank him for having raised so many points in the Paper to which he (Mr. Hicks) had intended to refer.

They had been told there was something like twenty million pounds' worth of sugar introduced into this country annually, and no doubt if a fresh industry, such as was suggested in the Paper, could be started on sound financial grounds, with a certain prospect of its being remunerative, it would be a great boon to agriculture. He, however, was a little sceptical as to whether that industry, if started, would prove to be profitable. No doubt a great deal would depend on the initial cost of the buildings and plant--also on providing the necessary working capital, but some of the figures which had been given them that afternoon were alarming, and did not seem to indicate that the industry was likely to be successful.

Then again, should factories be erected it would be necessary to provide cottages for the extra number of labourers and mechanics who would have to be employed in them, and he doubted if landed proprietors or speculating builders would be disposed to erect such cottages, as they could not feel sure that the factories were going to last, and if they were closed down the cottages would not be wanted.

He believed sugar-beet growing had been tried twice in this country a good many years ago. There was a somewhat large scheme started at Buscot in Berkshire, and at Lavenham in Suffolk; but in neither of those

cases did the industry last, and one of the factories was demolished and the other closed.

As Mr. Simmons had said, there would be considerable difficulty in getting agricultural tenants round a certain spot where a factory was to be erected to guarantee the growth of 2,000 acres of sugar beet, and apparently also sugar beet must be grown in districts where a large permanent water supply could be obtained.

At the present time a certain amount of sugar beet was being grown in some parts of Norfolk, Suffolk, and Lincolnshire, but unfortunately the greater part of it was being exported abroad, which was a system he deprecated, for the crop was constantly going off the land, and it was questionable whether anything would be brought on to the land in return.

The cultivation, though very similar to that of mangels, was to his mind much more expensive. They had to plough some 10 inches or 12 inches deep, which no doubt on some lands would be an advantage if the beet crop grown were followed by wheat; but some writers seemed to think that sugar beet improved both in the percentage of the sugar contained in the roots per ton, and also in the tons per acre if continually grown on the same land. Apparently the young plants had to be singled out by hand, and not as in the case of mangels with a hoe, while the mature crop had to be more or less forked up by the roots, for if pulled up, as were mangels, where it did not much matter if you left a little of the root in the ground, the beet started bleeding, and there was a great loss of the sugar constituents. They also had to be cleaned, and there was a considerable loss in the cutting off of that part of the root which grew above the ground. As it had been

stated that the breaking off of the leaves caused beet roots to die, this would seem to prevent the crop being shot over.

From the agricultural point of view to dispense with the growing of mangels was quite out of the question. He believed there were now 400,000 acres of mangels grown annually, and he should very much like to see that acreage maintained, if not further increased.

He had not heard anything about the seed required for the growing of the crop. He believed it had to be very carefully selected. That he was glad of, for he thought many farmers did not give sufficient attention to that matter, and were too fond of buying from small growers and neighbouring farmers, instead of going to a merchant who had the necessary machinery for cleaning the seed and supplying it pure. Perhaps some practical gentleman could tell him what the seed for sugar beet would be likely to cost. He had asked Professor Lloyd, but unfortunately he was unable to enlighten him.

The point raised by Mr. Simmons as to when the sugar beet would have to be delivered to the factory was an important one, as no doubt it might often clash with the harvest.

Another point was, when were the roots to be weighed, because if they had to be kept in small heaps or in a clamp for some weeks there would in all probability be a loss in weight, and in that case farmers would be at a considerable loss.

As to the by-products, no doubt they were of some value to the farmer, but he thought there were many other more important feeding stuffs on the market which certainly dairy farmers would prefer to use.

Mr. G. L. COURTHOPE, M.P. (Visitor) desired to thank them for their kindness in giving him an opportunity of saying a few words. He was particularly glad that the Paper to which he had to refer had been read by Professor Lloyd, for he knew he would not think, if he disagreed with him, that he did so in an unpleasant spirit. It was most desirable that the subject should be thoroughly ventilated, and the Paper would give rise to considerable discussion which would be widely published, and was therefore most useful.

Before he tried to deal with one or two of Professor Lloyd's points *seriatim*, might he take three general points: one from his Paper, one from the speech of Mr. Simmons, and one from that of Mr. Stanley Hicks? A point which Professor Lloyd made, not once, but three or four times in the course of his Paper, was that an English farmer, or John Bull, or they themselves, should not be so conceited as to think they could do better than their friends on the Continent. He himself was not satisfied that they could not do better, but it was quite sufficient for their purpose that they should do as well. If they went through the official figures of the dividends paid in the registered sugar-growing companies in Germany last year they would see that just over 30 per cent. was paid on the paid-up capital. They did not expect to do better than that, but if they could pay a fair price to farmers, augment the value of the land in the district which had been opened up, largely increase the head of stock in those districts, and at the same time add to the bearing powers of the land as far as cereals were concerned, he thought they would be satisfied without wishing to do better.

Mr. Simmons had referred to the American balance sheets, and said they could not do better than study

those. He agreed; the American figures for 1906, quoted by Mr. Lloyd, showed that the sale of sugar alone paid all expenses, and produced a clear $2\frac{1}{2}$ per cent. on the capital, and all the by-products were thrown in. These latter were entirely omitted from the Paper, and if they could pay $2\frac{1}{2}$ per cent. with the by-products in their pocket there was nothing to complain of.

Mr. Stanley Hicks said that considerable quantities of beet were now being grown in the eastern counties and exported. Now if it paid foreign countries to purchase beets in England, ship them to Holland, and send the product back in the form of sugar, paying the duty of £1 16s. 8d. and the freight from Hamburg to the warehouse in the City of at least 12s. 6d., surely it would pay them in England to manufacture sugar within a reasonable reach of where those crops were grown. He felt he was justified in making those three general points before dealing with other matters.

He thought Professor Lloyd had deceived himself—he hoped he had not deceived anyone else—by taking what he might call a confusion of figures. For instance, in giving the capital cost of the factories to be erected in this country he had in every case taken the increased cost of factories that would turn out granulated sugar, but the profit he had taken was on raw sugar. Then he had, perhaps intentionally, ignored the fact of the by-products. He thought he had therefore misled himself as to the possibilities of that industry in England.

As to the first question, Why should the Government be asked for five years' guarantee, or why it should be only five years, he personally did not think the Government should be asked to give any guarantee at all—they did not need it, and he was satisfied that neither growers nor manufacturers wanted it. Its only possible advan-

tages would be that it might offer a certain amount of encouragement to people to come forward with their capital, but as far as the industry was concerned, he felt sure that it would not be dependent on a Government guarantee, and it ought not to be suggested that such would be the case.

He would not mention the subject of feeding values, as Dr. Voelcker was present at the Meeting and was far more competent than he to deal with the matter.

The next point that Professor Lloyd referred to was the labour difficulty, and he should like to answer that by reading an extract from the report of the agent of the United States Board of Agriculture, who said: "One of the things that has impressed me most in studying the tendencies of the beet-sugar industry is the wonderful influence it is having on all that class of farmers, tenants, and labourers who may properly come under the term of beet growers. It is generally improving the productiveness of the soil, and the one feature of greatest importance is the tendency to methodical production of all crops. A sugar factory not only intensifies the farming, but makes the land support a larger population. In sugar-beet districts the number of inhabitants deriving their living from farming is increased many fold. The factory becomes the nucleus of settlement. Railroads are established, trolley lines built, churches organised, and free mail delivery installed. It also brings together and organises the people of the district for social and business co-operation. We find the people organised for serious consideration of everything that has to do with public roads, schools, churches and social business and intellectual progress. One of the first things that will be noticed

“ upon the establishment of a sugar factory in an
“ agricultural district is the influx of labour from
“ varying sources. When a new factory is under con-
“ sideration for a district the farmer says: ‘I cannot
“ ‘ possibly secure enough help to do the work I now
“ ‘ have on the farm; what can I do if I sign a contract
“ ‘ to grow an intensive crop like sugar beet, thereby
“ ‘ very much increasing the amount of labour required
“ ‘ on the farm?’ The reply to such a statement is that
“ the sugar factory will solve the problem. To the
“ ordinary farmer this seems paradoxical, but it is
“ perfectly logical. In watching the development of
“ conditions around every sugar factory now in opera-
“ tion in the United States I have yet to find a case
“ where the advent of a sugar factory has not attracted
“ labour, not only for growing beets but for all kinds of
“ farm work.” He only quoted that at length because
he thought that the actual experience of the official of
the American Department would be more valuable than
any expression of opinion that he could give.

Another point which Professor Lloyd put in the form
of a question was in regard to water, and the means
necessary for its purification after use. He would find,
if he studied the experience of Continental factories, that
it was possible, and, in many districts where water might
be a difficulty, it was the practice to use the water over
and over again. He admitted it involved more cost in
machinery, but it did away with the difficulty of
obtaining a very large supply, and partially did away
with the difficulty of disposing of the waste. Many
different purifying processes had also been adopted, and
some so dealt with waste water as entirely to remove the
obnoxious and offensive matter from it, and he was
informed by many authorities that the water could be

sent into any stream straight from the manufacturing process.

Professor Lloyd said: "If a farmer in a neighbourhood wanted lime, it would probably pay him better to use it fresh than to cart or carry these wet cakes to his farm, dry them, pulverise them, and then apply to the land." Why? The lime was usually found in an excellent condition for immediate application. The "saturation lime," as it was called, contained a number of other chemical constituents of great value, giving it a much higher value weight per weight for manurial purposes than the pure lime by itself.

Then as to frost and pests—particularly frost. Great stress was laid on that, not only by Professor Lloyd, but by Mr. Simmons, and he would point out that it had never been found that the beet crop had to be harvested in September. Early frost might be laughed at. The beets could stand at least 12 degrees of frost with impunity, and he thought the general experience of this country was that they never got severe frost till about December, and there was very little doubt to his mind that the whole of the autumn could be taken for the harvesting of the crop, which resisted frost much better than mangel for the reason that it was covered up to the crown while the mangel was not. The effect of frost on the young plant was exactly the same as in the case of the mangel.

The same remark applied to pests. He had only heard of one pest which was not common to the mangel that attacked beet. In one district in Germany the beet had been attacked by a nematode, which, it had been suggested, was the same as the eel worm that attacked oats, but he did not think that was clearly established, and those who had inquired on the spot had

come to the conclusion that the nemotode had been introduced by a too long cultivation of the same soil without necessary treatment to counteract its influence.

He would not say more, as he knew there were many others present who wished to speak. He would only ask them all to remember that in thinking of this crop from an agricultural point of view, as they probably did, they must remember that it was a cleaning crop and could be grown in rotation, and as a cleaning crop in rotation they had to compare it not with the most profitable crops that were grown but with other cleaning crops. Take the case of swedes—how many of them could show a profit on their swedes for feeding? Again, some districts of this country were swede-sick and mangel had to take the place of swedes. He had heard from Mr. Stanier, M.P., the other day, that in large districts in his neighbourhood where they could not grow swedes, as it was swede-sick, they had to grow mangel and could not get rid of them. He would ask them to remember that and to consider the possibilities of beet as a cleaning crop, and he did not think they would hesitate to say that it was a good thing for the grower whatever it might be for the manufacturer.

MR. W. EDGAR HORNE, M.P. (Vice-President) said the growth of sugar beet in Great Britain was a matter in which he took a considerable interest and had done for some time, as he felt that such an industry if it could be carried on profitably would be of great assistance to agriculture, and would not only improve the labourers' wages but would provide him with new and suitable buildings.

He could only speak as a farmer who had tried an

experiment in beet, and he was bound to say he had failed. He thought, however, one might learn very nearly as much by the failure of an experiment as by its success. He had had very little information as to the proper manner of growing beet about a year ago, and the principal information he had was to grow it as one would mangel. He therefore put in $1\frac{1}{2}$ acres of beet alongside some 10 acres of mangel. He bought the seed from one of the best seedsmen in the country, and he treated it, as far as he could, exactly the same as mangel, except that he found the beet much more brittle and difficult to deal with, as the young seed plants died if the leaves got broken, and it cost much more in labour singling.

He grew some 45 tons of mangel per acre on the 10 acres, and something over 20 tons of beet to the acre. When he sent samples of the beet to the analyst he found they were abnormal, of bad size, and thoroughly deficient in sugar, and much of the crop was of very little value. He grew it on sandy soil with rock about 6 inches underneath, and it was not till after his experiment that he was told he ought to have grown it on a soil with a depth of at least 14 or 16 inches. He thought that partly explained the failure.

As a farmer and also a stock dealer he wished to compare beets with mangels. In his neighbourhood they gave 11s. to 12s. 6d. a ton for mangel at the present time or nearly £25 an acre, if they grew 45 tons to the acre. He knew himself of mangel sold at 11s. a ton, and he had heard them being sold at 14s. It was very difficult to get away from those figures, and unless they as farmers could see their way to a fair profit on growing beet they would not be inclined to give up the mangel, which they knew they could grow

profitably. He intended however to have another trial at beet growing. He was going to get proper seed from abroad, and he hoped to be more fortunate on that occasion, for he was bound to say that some of his neighbours had been more successful than he had been.

If sugar beet could be grown profitably he did not think there would be any serious difficulty in taking a certain acreage away from the growth of other crops to devote it to beet. As far as he could see only 1 per cent. of land need be taken away to give sufficient for growing beet within a suitable distance from a factory. He feared, however, that as no one knew from year to year how many tons of beet an acre would carry the factory might have too much grown for it one year, or not sufficient another; that appeared to him a serious difficulty to overcome. For himself he believed that if one could find an enthusiastic and rather speculative gentleman who would put up a factory there would be no difficulty, at any rate for the first few years, in finding farmers who would be prepared to supply sugar beet, but he was not prepared to suggest that the shares for that factory would be taken up by farmers.

Dr. G. SCHACK-SOMMER (Visitor) said their thanks were due to Mr. Lloyd for having taken the trouble to enumerate the reasons why he thought the industry would prove a failure if introduced into this country, and he felt sure that all would be glad to learn that he was at one with them that the question whether sugar beet could be grown in England was settled in the affirmative years ago. This was a great step forward in the right direction, and before leaving that point he would briefly mention that the firm of Messrs. Rabelhke

& Giescke of Klein Wauzeleben, from whom most of the best seed was procured for the experiments, took the keenest interest in the introduction of this industry into Great Britain, and were quite ready to supply farmers with the best seed when the time came.

On the question whether sugar beet could be profitably grown in this country Mr. Lloyd did not criticise Mr. E. J. Cheney's figures of the production of beet in 1906 on a Suffolk farm, which showed a net profit of £4 7s. 7d. per acre on the basis of 17s. 6d. per ton for the beet. Was not that a fair return? Was not that better than letting additional land go out of cultivation every year?

To turn to the German farmer, they would agree that he had inducements through protective duties to raise grain and other crops which the farmer in Great Britain had not, and that therefore his grain crops commanded a higher price. Yet he had evidence that where there were factories willing to contract for increased quantities of beet the farmers in Germany dropped other crops in favour of sugar beet.

The particular factory he had in his mind was supplied by some 4,200 farmers. It had never paid less than 16s. a ton, nor more than 20s., and the farmers seemed quite content.

If a sliding scale for payment of the roots on their saccharine contents could be arranged this certainly would be best. The provisional contract made by the Sleaford people had provided for this. That company had made contracts with about 250 farmers to grow about 2,000 acres of beet for five years conditionally upon a factory being erected. He agreed with Mr. Lloyd that whether they could profitably grow beet or not was intimately dependent on whether a beet-

sugar factory would be a profitable commercial undertaking in this country; but he feared that he could not agree with him, however, that for any undertaking to promise the producer of the raw material for a series of years a price above what the lowest average of the manufactured article would permit, would necessarily be to tempt failure. In practice there was an "average price" and an "average cost"; these were the truisms of every business. It was quite true that the money which would be sunk in building a factory would be lost were the undertaking to prove a failure, but that was an argument against any form of enterprise.

In reply to the very pertinent question, "How to secure a satisfactory supply of labour for growing beets?" he would remind them that the experience in America has been that the first thing that happened upon the establishment of a beet-sugar factory in an agricultural district was the influx of labour.

He would now deal with the criticism of the figures taken from his published lecture, which Mr. J. Saxon Mills quoted in *The Fortnightly Review*. He could justify every one of those prices; they were supplied by Mr. O. Naegelé, a man of great experience, who very successfully managed the large beet-sugar factory of Strassburg for nineteen years.

Why £12 per ton for granulated sugar should be criticised he did not know. The average price for 88 per cent. beet for the last seven years was 10s. 5d., giving an average price for granulated much higher than £12.

The price of molasses paid to-day by makers of cattle foods was much higher than the £3 suggested, and he had lately to pay £5 a ton for cattle-feeding treacle which was bought to execute orders.

The price of £5 10s. a ton for slices was low compared with the price paid for them in Germany, viz., £6. He understood that the latter price had actually been bid for them by farmers round about Sleaford.

He noticed that Mr. Lloyd, although ready to criticise the figures when he thought them unduly favourable to the new industry did not readjust them when he found them unduly unfavourable. Thus, whilst they had taken only 3·6 per cent. for molasses, Mr. Lloyd showed himself that this should be 7 per cent., a correction which would double their tonnage of molasses.

The reader of the Paper pointed out that the dried slices, which according to Classen (no better authority could be quoted) represented about 6 per cent. of the roots employed, were in their statement 11 per cent. This was done purposely and by working according to Steffen's process, by which a considerable proportion of the molasses is left in the slices.

He must submit, too, that to say that it must be universally recognised that a manufacturing industry which depended for the whole of its profit, and even some of its expenses, on the sale of a by-product was not financially sound, was fallacious. What about most of the gas companies? It was also well known that for several years the amount received by the London General Omnibus Company for its advertisements was greater than the amount available for dividend.

The Steffen process which they were going to adopt at Sleaford had one indisputable advantage, viz., by its use the bad smell and taste of the waste water did not occur, and thus considerable expense in its treatment was obviated and there was no contamination of the streams.

Then again, German up-to-date beet-sugar factories no longer turned out molasses. Their products consisted

of a first and a second product sugar and slices. A director of a beet-sugar factory in Germany had kindly furnished him with the results of their last campaign of 14½ weeks' duration, ending 19th January last, which showed 15·55 per cent. of sugar yield and an estimated net profit of at least £18,325 on a share capital of £75,000. The following was the balance sheet :—

BALANCE SHEET, 1910.

<i>Debit.</i>			<i>Credit.</i>		
	£	s.		£	s.
Beets, 87,279 tons at 20s.	87,279	0	Sugar—1st product : 12,750 tons at 208m. 95 pf.* or m 2,664,112	133,205	12
Gross profit on sugar alone	52,076	12	Sugar—2nd product : 820 tons at 150m.† or m123,000	6,150	0
	£139,355	12		£139,355	12
Gross profit, sugar and slices	57,076	12	The slices I have been assured will realise at least	5,000	0
	£144,355	12		£144,355	12

PROBABLE PROFIT AND LOSS ACCOUNT.

	£	s.		£	s.
1. Beets worked, 87,279 tons at 20s.	87,279	0	Sugar and slices as above	144,355	12
2. Manufacturing cost arrived at last year, 72,190 tons were £28,540 13s., this year 87,279 tons in proportion	34,506	11			
3. Depreciation same as last year	4,244	12			
Net profit	18,325	9			
	£144,355	12		£144,355	12

Beet received from 4,185 farmers.

Coal cost 18s. per ton (here about 11s. to 12s. per ton).

* £10 9s.

† £7 10s.

The farmers could do nothing till the manufacturer was in a position to buy the crop when grown. For the financier, the enterprise for the reasons he had previously given, was a fair and promising business risk. It was not, however, one which would stand intermediate or promotion profits or founders' shares. Only if started on sound business lines had it a chance of success.

Government help would be very useful in enlightening the farmers to the fact that to grow sugar beet would be to their advantage, and this propaganda, which was really for the good of the whole nation, should not have to be defrayed by private individuals. No factory could flourish or even exist if the required tonnage of sugar beet were not forthcoming, but the farmer had everything to gain and nothing to lose by this new industry, and in his opinion, if those interested in starting it, instead of splitting up their energies in their various local attempts to start a factory, combined and agreed to club together with the one object of starting a model factory on the most suitable spot that could be found in Great Britain, they would not have to wait long to see a start made. A syndicate of, say, a dozen enthusiasts, who would each contribute £100 for preliminaries, should set to work to raise sufficient capital for this first factory, and he hoped to see it going and prosperous, and to be able to say to his friend Mr. Lloyd, "Well, you see, I told you it would not be a failure."

In conclusion, let him remind them that the whole progress of the world has been built up by people risking their capital, and he hoped they would do it in this case.

The vote of thanks having been put to the Meeting and carried unanimously—

The PRESIDENT said that as the hour was too late to allow of Mr. Lloyd's making the usual oral reply he would ask him to forward a written reply which might be published in the *Transactions*.

The Meeting then closed.

The following gentlemen having been precluded from speaking at the Meeting, owing to the lateness of the hour, have forwarded their opinions in writing for publication in the *Transactions*:—

MR. F. F. KEMP (Visitor) writes: The impression left upon my mind after carefully listening to Mr. Lloyd's Paper, is that his arguments have been collated from second-hand information, and information gathered in this way is apt to be dangerous, however honest the intentions of the compiler. For the last twenty years I have been in the sugar trade in Mincing Lane, and for some time past I have been taking an active interest in the question of growing and manufacturing sugar in this country, and I should like to give a few first-hand facts, gathered during my tours in the eastern counties of the fields where the beet was actually growing.

Before doing so may I point out the present position of Germany and Austria with regard to their consumption, production, and export of sugar to the United Kingdom. It is admitted on all sides that Germany is at the zenith of her production, as every available acre that can be put into beet has been so put. Her Government, since the abolition of the bounties, has preached sugar not only as a luxury but as a part of the daily diet of the masses. She has doubled the daily sugar

ration of her soldiers, and whilst production remains stationary her consumption is going up to such an extent that in under twenty years she will require for her own home consumption almost the whole of the 1,250,000 tons she is at present exporting to us. This means that prices must gradually rise in order to check this increase of consumption, and not only Germany but almost every other country is increasing its consumption. Why therefore should not the United Kingdom produce sugar to keep abreast of consumption ?

That we can grow sugar beet as well in this country as on the Continent has been conclusively proved, but I would go further and add that owing to our superior climatic and soil conditions we can grow here a larger tonnage per acre with a greater sugar content in the roots than they can on the Continent. Mr. Lloyd said that the seed used for the last year's experiments was the best kind. I can only say he could not have seen it ; I did, and in most cases found it to be unsuitable for our conditions in this country. From practical experience I cannot agree that the raising of the roots is an expensive and difficult matter. If the land has been deeply ploughed, and disintegrated with a cultivator before sowing, and the proper appliances which have been invented for the raising of the roots are used, there is no difficulty or great expense.

It has been stated that the farmer cannot make a beet crop pay if he only gets 17*s.* 6*d.* a ton for his roots, but I have spoken with a large number of farmers on this point, and they are all satisfied that if they can get 17*s.* 6*d.* per ton basis, 15 per cent. sugar in the root, and 1*s.* per ton per unit over 15 per cent., they could average over 20*s.* per ton for their produce, as they contend that with proper cultivation and the right seed they can

easily produce roots containing at least 18 per cent. of sugar.

Although Mr. Lloyd has a very poor opinion of the cattle-feeding properties of sugar slices, and places their market value at only £4 per ton, others are of a different opinion, and the German War Office are enormous buyers of sugar slices for feeding their cavalry horses, which are the finest in the world. I should also be pleased to introduce him to one of the largest and most scientific farmers in this country, who has been in the habit for some years past of importing large quantities of slices at a cost averaging £6 per ton. He has himself carefully superintended the feeding of his stock with them, and is of opinion that there is no other food to compare with sugar slices, and he states definitely that the results of feeding his stock with one ton of slices at £6 per ton and one ton of linseed cake at £10 per ton has invariably turned out much in favour of the sugar slices, and at a saving of £4 per ton consumed. The same farmer also offered and is still willing to contract for 5,000 tons of slices annually at £5 per ton, should a factory be started in his neighbourhood, and he told me that what he could not use himself he would be able to sell at a profit to his friends and neighbours.

Mr. Lloyd said it was a bad thing to have a settled price for the raw material required in a factory. I look at it the other way. Presuming we have a factory, we should be able to make contracts for five years ahead for our required quantity of roots, and this would suit the farmer as he would know he had an assured price for his roots; and surely it is a far sounder commercial proposition to have a fixed price for the raw material, to know almost to a penny per ton what it costs to manufacture sugar, and to know that year in and year out you must make

the average price for your sugar, than if you are subordinate to violent fluctuations of your raw material, such as cotton, for instance, and where perhaps two purchases in the year on the top of the market may turn your manufacturing profits into a loss.

To sum up, is it not a reasonable proposition that we in this country should now start this great new industry knowing that we can profit by the millions of money spent by Continental nations on scientific research, on finding out the right methods of cultivation, on the improvements in sugar machinery, and that if we were producing a million tons of sugar in this country we should be giving direct employment to 100,000 persons?

Mr. W. T. CHADWIN (Visitor) writes: Referring to Mr. Lloyd's figures, may I point out that the average capital cost of the sixty-three American sugar factories is two and a half times, and the capital per ton of sugar produced double that of the proposed British factories; that working expenses and management are three and a half times, and the cost of roots nearly double those quoted by Mr. G. Martineau, and that consequently such factories under our conditions would pay over 60 per cent. instead of 6 per cent.

In Mr. Lloyd's own estimate for a factory he shows an error between the value of the grade of sugar made and its selling price, representing an amount that would pay a further 10 per cent. beyond the 4 per cent. that he admits to be earned after allowing up to £1 2s. 4d. per ton for beets.

As regards price for beets to the farmer, this is more a question of return per acre than shillings per ton, cultivation, &c., costing the same for a heavy crop as for a light one. For instance, 20 tons at 17s. 6d. would pay him better than 14 tons at £1 1s.

Reply communicated by Mr. F. J. LLOYD :—

I must in the first place thank those who have taken the trouble to put their opinions before us with a view of ultimately arriving so far as may be at the truth. We should not forget, as some appear to do, that everything which is said regarding the production of beet sugar in Great Britain must of necessity be speculation. There are absolutely no definite facts relating to this country on which to argue. It thus becomes necessary to seek our information from other countries, and we must not confine our attention to one only, but examine all, for even amongst them all there will not be one where the conditions are quite similar to those extant here. Therefore the criticism of Mr. Kemp about second-hand information is beside the mark, and the most amusing thing is that like nearly all my critics he utilises information of the same second-hand quality.

But let me try and reply briefly to some of the really important questions raised. First, as to the effect of sugar beet on the soil. It is an exhausting crop, and consequently, if you study the rotations practised in sugar beet growing districts, you will find that it is seldom grown oftener than once in three years on the same land.

The beetroots have to be delivered to the factory as they are drawn. The period may extend for nearly three months. But otherwise, either the farmer must clamp his roots or the factory store them: additional expense in either case.

There were two points raised by Mr. Courthope which I would refer to. He mentions 30 per cent. being paid as interest on the paid-up capital. But there are many banks, to say nothing of commercial undertakings, in London to-day paying two or three times that per-

centage on the paid-up capital, yet no one would for a moment anticipate such a return on a newly started enterprise. These sugar companies were fostered by bounties and work under protection, and the factories were brought to perfection probably on profits, not on original capital, and they are now in a position to retain sugar and benefit by the speculations of the sugar market. These speculations and natural causes raised the price of sugar within the last twelve months to £15 per ton. Can Mr. Courthope say how much of that 30 per cent. profit came from actual manufacturing profit, how much from speculation, and the abnormal price which sugar fetched for some time? I regret that Mr. Courthope should, as I believe, be misled and so mislead others.

As to the American factories not counting by-products, so far as I can see they estimate them there at nearer their true value, which is very little.

As regards Mr. Courthope's quotation from an agent of the United States Board of Agriculture, I can only refer again to my quotation from an official document of the United States Government, and also say that I know from Professor Wiley personally how great the difficulties are to which I have drawn attention.

As an illustration of the erroneous statements, palpably erroneous statements, put forth by the strong advocates of beet-sugar production, one has only to consider the statement sent in by Mr. Chadwin of "cultivation, &c., costing the same for a heavy crop as "for a light one," *e.g.*, 20 tons and 14 tons. So then neither the raising of 20 tons of roots, nor the cartage to factory costs more than the raising and cartage of 14 tons. Could anything be more self-evidently absurd?

I now pass to Dr. Schack-Sommer's carefully considered criticism. I did not draw attention to any of

the reputed results of early English growers, simply because they are *estimates*, and have never been checked by factory weighing, while the few recent crops that have been so checked were painfully unsatisfactory.

We now come to another of those mysterious balance sheets, many of which I have examined, but nearly all of which are difficult to explain. Here we have a capital of £75,000 said to be sufficient to turn out 13,570 tons of sugar, whereas in the balance sheet given only last November and quoted by Mr. J. Saxon Mills—it appears from Dr. Schack-Sommer's own figures—the capital expenditure was £88,350 on a factory to produce 3,604 tons granulated sugar. Even by this new balance sheet we find the cost of production was for roots £87,279, for manufacture £34,506, or a total of £121,785, while the sugar produced was 13,570 tons, so that it cost £9 a ton to produce. Evidently this is a very low figure; but we cannot get at the real financial position of the factory from these figures. The share capital is no guide. What is the actual capital value of the whole factory to-day? What would it cost to build that factory as it stands to-day improved and replete may be with every appliance, the result of years of careful and profitable working?

There is one other argument often brought forward, a very specious argument, that because we spend so many millions a year on imported sugar we ought to manufacture it ourselves. I would ask those to whom this argument appeals to look up in *Whitaker* how much we spend annually on imported dairy produce or corn. We know we can produce both of these, why do we not? Simply because it does not pay. Nor would the production of beet sugar.

JUDICIAL AND PARLIAMENTARY DECISIONS

WITH REGARD TO

RIGHTS IN UNDERGROUND WATER SINCE 1907.

BY W. VAUX GRAHAM, M.INST.C.E. (ASSOCIATE),
AND
HAROLD F. BIDDER, BARRISTER-AT-LAW
(ASSOCIATE).

*Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION, held on Monday, 13th March, 1911.*

LESLIE ROBERT VIGERS (President) in the Chair.

The authors had the privilege four years ago of reading a Paper before this Institution upon "Under-ground Water." In that Paper they attempted to show that the law upon the subject, particularly in relation to the pumping of water in large quantities by distributing bodies, was very unsatisfactory, and had its origin in a state of things wholly different from the present; that in old days a virtual disregard of the injury that may be caused by the abstraction of underground water may have worked well enough as a compromise between the conflicting claims of adjoining landowners, the population being comparatively scattered, and powerful pumps not having been brought into use; but that now, with

our enormous centres of population requiring water, the increased need of water even in country districts, and the use of machinery capable of abstracting immense quantities, the law has completely broken down. And the authors suggested that public opinion was moving in the direction of a change as the result of which some right in underground water other than that flowing in a defined and known channel would be recognised.

The last four years have seen a very considerable development of this movement. In considering the present state of affairs it will be useful to examine, first the decisions in the Courts affecting the subject, next the action of Parliament in dealing with Water Bills, and finally Lord Desborough's Water Supplies Protection Bill of 1910, which, while no doubt requiring modification, was yet a plucky attempt at constructive advance.

RECENT LEGAL DECISIONS.

An interesting and novel point arose in *The Salt Union, Limited, v. Brunner, Mond, & Company* [1906] 2 K. B. 822, namely, whether a landowner has the right, by pumping underground water, to abstract salt which has been dissolved from rock upon another man's property. In that case the defendants were pumping from a shaft that was connected with a number of old underground salt workings, some of which belonged to the plaintiffs. The Chief Justice, who considered the point raised to be one of great difficulty, held that in the circumstances no actionable wrong had been committed. He was not prepared to say that if a man pumped up brine that was necessarily formed from his neighbour's rock and not from his own, it would not be actionable; but here, in view of the artificial conditions underground,

and the impossibility of separating the properties or distinguishing the origin of the brine, no action would lie.

An interesting, if rather technical, point was decided in *Fletcher v. Birkenhead Corporation* [1907] 1 K. B. 205. In that case pumping at the defendant's statutory waterworks had caused subsidence by abstracting a bed of running salt from under the plaintiff's house—in itself an actionable wrong. It was held that, although as a rule no damage can be recovered from a statutory company for injuries inflicted while duly performing that which it was authorised by Parliament to do, yet the filling of the reservoirs of a water company is included under the head of operations for construction and maintenance of the works, in which case compensation is provided for by the Waterworks Clauses Acts.

The law of underground water has, as we have said, broken down in relation to authorised distributors who abstract large quantities of water. Decisions, therefore, affecting their right to sink wells are of importance in this connection.

In addition to the powers of taking land compulsorily contained in private Water Acts, there is usually inserted a section giving power to acquire a limited amount of land by agreement. It appears to have been generally assumed by water companies and other bodies that on such land they were entitled to sink wells and erect pumping stations—as any other landowner might. But in the case of the *Attorney-General v. Frimley and Farnborough District Water Company* [1908] 1 Ch. 727, it was decided by the Court of Appeal that the company was not entitled to construct any but the specified works authorised in their special Act and works ancillary thereto. The section of that Act which allowed the pur-

chase of land by agreement ended with the proviso that "no buildings should be erected on such lands except such as were required for the purposes of the company's waterworks." Even without this, Swinfen Eady, J. (in the Court below) had held that all powers bestowed upon the company had reference to the authorised waterworks specified in the Act and to no others; the Master of the Rolls agreed, and also thought that the above proviso clearly negatived the right of erecting a pumping station. "For the purposes of the company's waterworks" he held to mean for the purposes of the companies' defined waterworks; while Fletcher Moulton, L.J., went even further. "We should be acting," he said, "contrary to the whole scheme of legislation of this kind if we were to hold that, after the Legislature had required plans and sections of the proposed waterworks to be put before it, and had taken evidence with regard to their suitability . . . it had added a clause which defines the amount of land to be held simply by its quantity and not by its position, so that it would be open to the company . . . to start five or ten new waterworks, the propriety of which had never been considered by Parliament."

The principle thus laid down seemed clear, and a number of water companies promoted Bills in the next session to legalise wells that they had sunk upon lands acquired by agreement. Then in 1910 came a decision which, rejecting the general principle above laid down, leaves each case to be decided on the words of the special Act in question. This was the *Attorney-General v. Barnet District Gas and Water Company* ([1910] 101 L. T. 651; 102 L. T. 546), which was carried up to the House of Lords, and there unanimously decided in favour of the water company. The latter were empowered by their

special Act to execute upon lands purchased by agreement, for the purposes of or in connection with their waterworks, any of the works authorised by Section 12 of the Waterworks Clauses Act, 1847, which includes the power to sink wells. There was a proviso as to buildings similar to that which had struck the Master of the Rolls in the previous case. The House of Lords decided that the company was entitled to sink a well for the supply of an authorised reservoir upon land purchased under this power. The Lord Chancellor delivered a judgment that contained grave words of warning. "I must confess," he said, "that so far as I see at present the construction which we feel bound to place upon this private Act may have serious consequences Although I cannot give effect to the argument of the appellant, I do feel that the insertion of clauses of this kind may create great danger Prompt vigilance is needed in order to secure the interests of the public from being jeopardised by the insertion of special powers of this kind unadvisedly, without full consideration, in any private Act of Parliament."

While not in terms overruling the *Frimley* case, the distinctions drawn seem very fine, and it would require considerable nerve now to attack a water company on similar grounds.

AMERICAN DOCTRINE OF "REASONABLE USE."

In England it could not now be questioned that a landowner has by the common law a right to abstract all the percolating water (that is to say, water flowing underground not in a defined and known channel) that he can collect beneath his land, entirely regardless of the purpose for which it is collected or of the injury

he may be inflicting on neighbouring lands. But in America, where the English common law is administered as interpreted by the Supreme Courts of the various States, this is far from being the case. In fact it would appear that the majority of State Courts have thrown over *Chasemore v. Richards*, and hold that, of two adjoining landowners, the rights of both in the water beneath their lands have to be considered, not merely the right of one of them to abstract it; and that, while conceding to a landowner an unlimited right to take underground water for reasonable purposes connected with the beneficial use and enjoyment of his land, they deny his right to waste it or sell it in large quantities for distribution to the injury of adjoining owners. This is known as the doctrine of "reasonable use," and was referred to by the authors in their previous Paper.

Three recent American decisions may be noticed. The first (*Pence v. Carney* [1905] 112 American State Reports 963) was a case in West Virginia, and concerned a medicinal spring belonging to the plaintiff, the flow of which had been stopped by the pumping operations of the defendant during the sinking of a well. The Court found that the water so abstracted was percolating water, not flowing in a defined or known channel, and while they held that the operations so far had been reasonable, they intimated that the defendant would be prevented contravening the rule. Presumably they had in mind the despatch of large quantities of water in bottles—a trade that the plaintiff carried on. "We assent," said Cox, J., "to the later doctrine of reasonable and beneficial use, which constitutes rather a qualification of the early rule than an announcement of a new rule . . . Such reasonable and beneficial use has often been understood and held to mean use for any purpose for which the

“owner of the land, upon which underground such
“percolating waters are found, might legitimately use
“and enjoy his land.”

The next is a case in the State of New York, *Hathorn v. Natural Carbonic Gas Company* ([1909] 128 American State Reports 555). There the defendants had sunk a well and installed pumps above the plaintiff's springs, and were abstracting percolating water and reducing the flow of those springs. The water was charged with carbonic acid gas, and both plaintiff and defendant wished to use it for trade purposes. The Court held that this state of facts disclosed a cause of action against the defendant, and they pointed out that in the earliest English case of *Acton v. Blundell* (12 M. and W., 324), upon which the whole English doctrine was based, the damage, for which there was held to be no remedy, was caused by the defendant in doing an act (namely, mining) directly and naturally connected with the improvement or enjoyment of his own land.

The last case contains a complete repudiation of the English doctrine by the State of New Jersey. It is *Meeker v. The City of East Orange* ([1909] 134 American State Reports 798). The plaintiff owned a farm watered by a brook. The defendants, for the supply of their city, sank a large number of artesian wells, reduced the flow of the plaintiff's stream, and dried his land so that crops would not grow. The Supreme Court of the State held that he was entitled to damages. In the course of his judgment, Petney, C., after going through the older cases, went on: “It is not too much to say that the rule
“adopted in *Chasemore v. Richards* and the reasoning
“upon which it was rested have not withstood the
“test of time, experience, and ampler discussion, and it
“is entirely clear that the strong trend of more recent

“decisions in this country is in the direction of a
“repudiation of the English rule and the adoption of
“the doctrine that there are correlative rights in per-
“colating underground waters; that no landowner has
“the absolute right to withdraw these from the soil to
“the detriment of other owners, and is limited to
“reasonableness.” And the Court held that the abstraction of percolating underground water (by artesian wells be it noted) to the damage of the plaintiff for the purpose of supplying the city of East Orange was not a reasonable use of the water.

The law of underground water has thus been developed in America in a sense diametrically opposite to the law that now holds in England. And if *Chasemore v. Richards* were now to come up to the House of Lords for decision for the first time, it is at least possible that, in view of the experience of the last fifty years, it would be differently decided. It is interesting to see Lord Wensleydale's rejected views in that case becoming the law of the Western Courts.

PRACTICE OF PARLIAMENT WITH REGARD TO WATER BILLS.

As the authors pointed out in their former Paper, water-distributing bodies created by Parliament have peculiar facilities for abstracting and disposing of very large quantities of water such as no ordinary landowner possesses, as, for instance, their power to lay lines of pipes. Parliament therefore, before conferring powers in fresh cases, examines more and more carefully the effect of the proposed operation upon the surrounding neighbourhood, without regard to the question of the strictly legal right of those to be affected; and generally

it may be said that any person or body that can show a prospect of serious injury through the abstraction of underground water as the result of a Water Bill can to-day obtain protection or the right to compensation before the Bill becomes law.

Thus in the Holderness Water Act of 1908, compensation is provided for in the case of private wells, existing at the time of the construction of the works, and situated within one mile of the works if north of an east and west line drawn through them, or within two miles if south of that line. The burden of proof that the pumping at the works caused the diminution of supply is left with the owner of the well.

A similar provision is contained in the Frimley and Farnborough District Water Act, 1909. The private wells must there be within two miles of the works. The promoters resisted this clause, but it was forced upon them by the Committee.

The South Staffordshire Waterworks Act, 1909, was promoted to legalise certain works that appeared to be unauthorised in view of the East Grinstead and Frimley decisions. The protective clause there provided that compensation should be paid for any diminution of supply in wells, ponds, or streams within two and a half miles of the works authorised by the Act. The burden of proof was here for the first time shifted to the company; they have to show, if they can, that the diminution was not caused by their pumping.

The Cambridge University and Town Waterworks Act, 1910, contains a number of protective provisions, some in the form of agreements dealing with particular estates and interests. The onus of proof varies. One interesting restriction is inserted for the protection of Trinity College and certain private owners, and prohibits

the abstraction of more than 400,000 gallons from the lower greensand in twenty-four hours, providing at the same time for the gauging and recording of the amounts abstracted.

The East Grinstead Gas and Water Act, 1910 (again an Act to legalise unauthorised works) provides for compensation "if it shall be proved that the pumping by
" the company at the pumping station by this Act
" authorised has caused any diminution or depletion of
" the supply in any well in the parish of Forest Row
" existing at the time of the passing of this Act as an
" effective source of supply, such well being situate
" within a radius of two miles from the said station." Here, as will have been observed, the burden of proof is left upon the owner of the well. This clause was inserted by agreement.

LORD CHAIRMAN'S CLAUSE.

The protection in these cases refers to the damage that may be occasioned through the operation of particular authorised works; and, generally, the whole theory that the interests of a neighbourhood are safeguarded by a thorough inquiry before a Parliamentary Committee must depend upon the proposed works being specified before that committee, at least in so far as their magnitude and general position are concerned. If certain works are authorised after careful inquiry and at the same time the promoters of the Bill are given power to construct any other works they may fancy—are given, so to speak, a blank cheque—the proceeding becomes something very like a farce. Yet general words incorporated in an Act have, as we have seen, been held to have this effect.

To prevent the possibility of this the Lord Chairman in 1907 inserted into the Model Water Bill of the House of Lords a clause to the effect that the promoters should not sink wells or construct works on any land for the taking of water unless the well or works and land were specified in an Act of Parliament.

This clause has been altered this year, and now provides that the promoters "shall not construct any works for taking or intercepting water from any lands acquired by them unless the works are authorised by and the lands upon which the same are to be constructed are specified in this or some other Act of Parliament."

The object of this alteration, no doubt, is to remove difficulties as to the specification of works, it not having been the custom in Water Acts to specify pumping machinery and other works in detail. But no statutory body could in any case construct works unless they were authorised to do so; the point of the clause as it stood before was that the particular works should be in some sense described, and this obligation is now withdrawn, specification of the land alone being required.

Model clauses are, of course, in no sense part of the law of the land; but they are an indication of the intention of Parliament to insert them in Bills of the class to which they refer unless the special circumstances of the case render them inappropriate.

MODES OF OBTAINING WATER POWERS.

Before dealing with Lord Desborough's Bill it will be well briefly to point out the various ways in which water distributors at the present moment obtain their powers. These are either derived from special Acts, or

Provisional Orders confirmed by Act of Parliament; or they are conferred by the general law.

1. Local authorities and companies can obtain special Acts authorising them to construct works and supply certain districts. With regard to the future, it is unlikely in view of the Lord Chairman's clause that any promoters will be granted unlimited powers of sinking wells; the land at least upon which they propose to sink will have to be specified. And, as we have seen, any person or body able to do so has by bringing their cases before Parliament a very fair chance of obtaining protection or compensation for any injury they may be caused. Those, however, who are unacquainted with Parliamentary procedure or unable to avail themselves of it remain liable to injury as formerly.

With regard to Acts that have been already obtained, the Barnet case shows that there are cases, and probably many, in which the undertakers have the right to sink wells and make works where they please.

2. Under the Gas and Waterworks Facilities Acts small companies obtain Provisional Orders from the Board of Trade. These Provisional Orders have to be confirmed by Parliament; the works authorised are specified in them, and the Board has adopted the Lord Chairman's clause.

3. Under the Public Health Act, 1875, Section 303, local authorities can obtain from the Local Government Board extensions of the provisions of existing water Acts. Such extensions are granted, after a local inquiry, by Provisional Order, which has to be confirmed by Act of Parliament. Since 1907 Parliament has insisted on the insertion in such Provisional Orders of the Lord Chairman's clause, a clause which the Local Government Board were very loath to adopt.

With regard to these inquiries by a Government Department before granting Provisional Orders, the authors desire to make one general remark. Even assuming that the details of a water scheme are presented at the inquiry, the Department in arriving at a decision cannot give much weight to the claim of those who have no legal right. Injury caused by the withdrawal of underground water not being recognised by the law of the land, the Department would be placing themselves above that law in considering it. Only Parliament is superior to the law, and for that reason, if an inquiry is to be relied upon in each case, either that inquiry should be before Parliament or the inquiring body should be directed by Parliament to regard such claims.

4. The most far-reaching power under the general law is that conferred upon local authorities under the Public Health Act, 1875. By Section 51 of that Act any local authority may supply its district with water, and may construct waterworks and dig wells for that purpose; and by later sections powers of laying mains and pipes and other powers under the Waterworks Clauses Acts are conferred.

Here the comfortable theory that under the present condition a satisfactory inquiry is assured before large waterworks are brought into operation completely breaks down. It will be simplest to give an instance of recent occurrence—as usual, upon the River Wandle.

RIVER WANDLE PROTECTION ACT, 1908.

The Corporation of Croydon in 1897, seeking additional sources of supply for their water undertaking, applied to the Local Government Board for sanction to a

loan for the purpose of sinking a well at Waddon near the head water of the Wandle. If the loan had been sanctioned no Provisional Order would have been necessary, so that in any case the scheme would not have come before Parliament; but before sanctioning such a loan it is the practice of the Local Government Board to hold a local inquiry. An inquiry was accordingly held, at which the riparian owners were heard; and the application was refused, though not, it is believed, on the Wandle case. This, however, does not affect the principle involved. The corporation, still requiring water, proceeded (presumably out of the rates) to make boreholes, and finally to construct a well of very large capacity; and in 1908 those interested in the Wandle found themselves faced with the prospect of having large quantities of water abstracted underground above the springs of their river from the very well which the Local Government Board had rejected. In these circumstances they promoted a late Bill, which eventually became the River Wandle Protection Act, 1908, the object of which was to restrict the powers of the corporation to sink or use wells that had not been specifically authorised by Parliament. The rules of both Houses were suspended to enable their Bill to be brought forward, and in the end a compromise was arrived at under which the corporation were deprived of their power in the future to sink wells that would affect the Wandle, but were enabled to use their Waddon well, subject to a limitation as to quantity. The preamble of the Act recites that it is inexpedient that the natural flow of the River Wandle should be reduced without the specific authority of Parliament.

It is impossible, when one considers this case, to restrain a smile on finding it actually cited by the

representative of the Local Government Board before the Committee on Lord Desborough's Bill as an example of the satisfactory protection afforded to all interests concerned by a Local Government Board inquiry.

Thus any local authority has the power to construct waterworks of any size and in any position, subject only to certain restrictions as to works outside their district or within the limits of supply of a statutory water company. When the immense consumption of water of some large towns is considered, together with the great financial resources of many corporations and other authorities, it will be seen that their power to inflict injury by the abstraction of underground water is as great as it is completely unchecked by any shadow of inquiry or supervision.

RAILWAY COMPANIES AND COLLIERIES.

While we are thus upon the general subject it will be convenient to deal with two other classes of cases where very large quantities of water can be abstracted and utilised. One of these is the case of the railway companies, who have enormous lengths of line along which they can pass great quantities of water for their own use. The authors dealt with a concrete instance (the London, Brighton and South Coast Railway) in their last Paper, and they will only now say that it seems clear that, inasmuch as their power of dealing with great quantities of water depends upon statutory privilege, they should be placed under analogous restrictions in regard to authorisation of works to those imposed upon statutory water distributors.

The other case is the case of industries such as coal-mining, which may result in a very large abstraction of

underground water from the neighbourhood. While the question is a very difficult one, the authors submit that a distinction may rightly be drawn between the consequences of a use of land which is inherent in the landowner's right, and requires no extraordinary powers to be granted by Parliament before it can be exercised, and the consequences of operations which require statutory powers before they can be effected. But it seems clear that a combination of the two (such as the sale by a private landowner of water to a distributing body) should be restricted.

WATER SUPPLIES PROTECTION BILL, 1910.

To come now to Lord Desborough's Bill. This, the Water Supplies Protection Bill, 1910, was referred to a Joint Select Committee of the two Houses. The Bill dealt with the operations of "authorised undertakers"—in which phrase were included all local authorities or companies authorised by Act of Parliament or Provisional Order confirmed by Act of Parliament to take water for purposes of distribution and supply; and its main objects were to ensure that in the future no authorised undertaker should sink wells or construct works unless the wells and works and their sites had been specified in some Act of Parliament, and to provide for compensation in cases of injury to private supplies of water by the abstraction of underground water for public supply. There was also a provision with regard to the supply of a locality whence or through which water is taken, with which we need not now concern ourselves.

The first object was proposed to be attained by the application to all authorised undertakers, existing as

well as future, of the Lord Chairman's clause as then applied to Water Bills. Clause 3 of the Bill provided that "notwithstanding anything contained in any Act of Parliament or Provisional Order no authorised undertaker shall after the passing of this Act sink any well upon or construct any other works for taking or intercepting water from any lands unless those works and the land upon which the same are to be constructed are specified in an Act of Parliament."

This clause only applied to future works ; but it seems clear on careful consideration that it would have affected all existing general powers to construct works without specific authority. The committee, however, appear to have been troubled as to whether it was retrospective or not ; and much of the evidence was given on the assumption that it did not affect existing rights, in which case it was, of course, merely an enunciation of the principles now applied to every new Bill by Parliament.

The committee, in the report that secured the rejection of the Bill, profess themselves in favour of the principle of full Parliamentary inquiry into the proposals of any water scheme. "Parliament should be in possession of full information as to the objects of the scheme, and the means for carrying it into effect." But "they consider that in the present imperfect state of information on the subject of underground water Parliamentary control over such schemes can be better secured by the insertion of any necessary safeguard in each Bill which comes before Parliament than by making Clause 3 of the present Bill part of the general law." But the whole crux of the question centres in those powers which certain bodies now possess of conceiving and carrying out extensive water schemes without any sort of

Parliamentary control, and even without that vague supervision which the Local Government Board profess to exercise.

One of the grounds put forward by the Committee for their rejection of Clause 3 was "the present imperfect state of information on the subject of underground water." Yet the very imperfection of that information renders it essential that every case should be inquired into on its merits, and that no powers under the general law should be utilised to give to a body with abnormal opportunities of disposing of and distributing water a perfectly free hand as to the methods employed.

A difficulty no doubt arises with respect to water distributors with special Acts under which they have obtained an uncontrolled power of constructing unspecified works. Where the whole individual case has been considered by Parliament, and after consideration such a power has been specifically granted, it clearly should not be taken away by a general Act; and in this (for such would have been the effect of the clause) no doubt the Bill went too far. But the circumstances are different where such powers are acquired rather by inference than by direct provision—as in the Barnet case.

In the opinion of the authors it cannot be supposed that Parliament, in passing the special Act, foresaw such a far-reaching inferential consequence and inquired into its result; and no hardship would ensue if the distributing body were compelled to submit to a fresh inquiry before embarking upon a new undertaking that certainly was not before Parliament when the original powers were granted.

On the general question it was strongly urged before the Committee that this clause would prevent authorised

undertakers from carrying out necessary developments of or changes in their existing work; this, however, would be met by excepting "works ancillary to" the original works (in the words of the Frimley case) from the operation of the clause.

It was also urged that the smaller local authorities would be prevented from taking advantage of the present simple procedure by Provisional Order in undertaking small schemes, and that they had neither the money nor (in the case of rural district councils) the power to apply for Acts of Parliament. The authors are not quite clear to what this objection refers. A scheme contained in a Provisional Order confirmed by Act of Parliament is clearly "authorised by Act of Parliament" within Clause 3; while if a loan for the carrying out of works is referred to, the sanction of the Local Government Board and not a Provisional Order is required. In the latter case the point might be met by excluding schemes of a certain limited capacity (say, 50,000 gallons a day) from the operation of the Bill.

COMPENSATION.

We now come to the provisions of the Bill with regard to compensation. They were certainly very far-reaching. Clause 4 of the Bill provided in effect that if any private water supply (that is to say, streams, ditches, ponds, wells, and bore pipes, owned or used by any person not being an authorised undertaker) within a certain area were diminished or injured subsequently to the construction or enlargement (after the passing of the Bill) of any works of an authorised undertaker, compensation should be paid in default of proof that such diminution or injury was not caused by the works.

To obtain compensation the private water supply must be within two and a half miles of the works.

Now it is to be noted that authorised undertakers themselves who suffered injury were not to be entitled to compensation. This seems to the authors to be indefensible. Assuming a water company or other distributor to be established (after Parliamentary inquiry) in a certain spot, they are at least as much entitled to protection as other users of water in the neighbourhood; and the effect of including them would be that before establishing a new pumping station a company or authority would look very carefully at the probable effect upon wells, authorised or private, within two and a half miles.

Great objection was taken to this clause before the Committee with respect to the onus of proof. It was said that it would be most difficult for a water distributor to prove a negative, that the decrease of private water supplies might well be due to drought or other causes, such as the sinking of coal shafts, and that it would lead to endless litigation. On this point the authors do not at present feel competent to offer any opinion. It is one of extreme difficulty, and it is clearly subsidiary to the main point, namely, to secure the recognition of some right in underground water.

They suggest, however, that the simplest solution would be to leave the onus of proof upon the person claiming to be injured, and to remove the limit of area within which such claim may be made. A radius of two and a half miles is (as any other figure would be) necessarily very arbitrary, and could not suit all cases: while if the principle of compensation is correct there seems no reason for excluding anyone from the benefit of it—so long as he could prove his case. For the

working of such a solution it would seem not unreasonable that authorised undertakers should be compelled to keep and exhibit on demand complete records of pumping.

The Committee in their report laid great stress upon the necessity of creating an organisation empowered to inquire into the whole question of surface and underground water supplies from a comprehensive standpoint, to supervise the future allocation of supplies, and to serve as an authoritative adviser to Parliament in the consideration of particular schemes. They accordingly recommended the appointment of a central authority to collect information as to the water supplies and water needs of various parts of the country, and the division of the country into watershed areas with local representative boards under the central authority, who should prosecute systematic and continuous inquiries into the water supply of their jurisdiction, take all necessary measures to husband such supplies (both surface and sub-soil), secure their preservation from pollution, and advise on their allocation for sanitary, industrial, and other purposes. With this recommendation the authors heartily agree. The information collected would be invaluable; while, with the increase of population, the systematic division and control of water supplies is the only alternative to chaos. But the establishment of such bodies is still an ideal of the more or less remote future; and even after their establishment many years must elapse before they would have collected sufficient data to formulate any comprehensive scheme. In the meantime all parties appear to be agreed on the necessity (all the greater because of our want of general information) for careful inquiry before large water schemes involving extensive pumping are carried out; and it is to the

ensuring of such inquiry that legislation should now be directed.

Mr. R. W. HARPER (Associate) said they must all regret the superabundant surface water that evening which had led to such a small number being present to hear about the merits or demerits of underground water. To that alone could he attribute the small attendance when so useful a Paper was being read, and one which formed a fitting complement to Mr. Baldwin-Wiseman's Paper on "The Conservation of our National Water Resources," delivered at The Institution in January last.

It seemed to him that they had reached a very awkward position in regard to the matter of underground water. On the one hand they had the case in which a large pumping authority, whether it were a company or a corporation, could pump adversely to the rights of the private owner (he said "rights" in the sense of natural rights not legal rights), and on the other hand they had the case of the landowner with a long purse who, although not himself requiring the water, could nullify the efforts of a corporation to obtain a supply for a district badly needing it. Those two positions were respectively illustrated by the Barnet case, where the landowner was attacked by a public body, and by the Bradford case where the individual, so to speak, simply trumped the card of the corporation by sinking a well—without any object of using the water, but merely to secure compensation—which carried away the water that otherwise would have been available for the company's use. In such a position it simply became a question of the length of the purse of the contending parties, and it seemed

time for Parliament to interfere. The question was, what was the best general principle to be adopted.

It was a singular thing that in this country water rights never formed the subject of any discussion before the case of *Acton v. Blundell*, which was decided about 1840. That was drawn attention to by the learned author quoted by Mr. Justice Cox, to whom Mr. Bidder referred in dealing with the subject of the difference of water rights as understood in America and England. Up to 1840 there was no common law of England on this subject, and at the time the States adopted the common law of England there was nothing for them to adopt on the question of water rights, and they consequently built up their law on what seemed natural and equitable principles. The speaker's researches had led him on somewhat similar lines to those the authors had taken; he had studied the case law in several of the States, and he had found the decisions all tended in the same direction. The individual had the right to percolating water under his land, but if he used it he must do so in a reasonable manner, and he could not, as in the case of *Pickles v. The Bradford Corporation*, utilise it to the detriment of somebody else, who but for him would have the right to use it. He could not bring it to the surface, take it away, and sell it to somebody else. It was there, it was one of the provisions of nature, it rested in a particular district, it was useful if employed in that district, and if it were taken away it had in many instances to be replaced by something else. If by the act of the Legislature, and for the general good of the community, it had to be taken away from the individual to whom it would otherwise belong, compensation should certainly be provided. It seemed to him the American law of water rights was eminently sane

and just, and it would be advisable to attempt to get the same view adopted in England.

It was noticeable that in the case of *Chasemore v. Richards*, which went to the House of Lords, Lord Wensleydale took the view which had been adopted in America. But although he took that view, and in his speech spoke very powerfully on the point, yet he did not appear to have given effect to it by his vote, because the Lord Chancellor, Lord Wensleydale, and another lord unanimously laid down the law as it had since remained. That it had worked satisfactorily he thought no one could affirm. If one went to Parliament with a scheme with regard to underground water one never knew what one would be met with. He had been speaking to Mr. Whitaker of a case which he thought he would remember. In 1903 a Bill was promoted by the Oldham Corporation, who proposed to take water from the other side of the Pennine Range, in Yorkshire. There was a series of disused reservoirs which nobody had any kind of interest in. They were very anxious to obtain that water to supply their own district, and they proposed to take it by a tunnel, three or four miles in length, through the Pennine Range. It was objected to, not by the people in the valley in which the reservoirs existed, nor by anybody who really had any great grievance against their having the water, but by the millowners in an adjacent valley. They said that the tunnel would have a tendency to drain the water of the hill which flowed down their valley—a subsidiary valley of the range—and so they would lose the water which at that time came into their valley in Yorkshire, and which would be taken into Lancashire. The promoters of the Bill offered to make a counter drain to drain back any water which might be taken along their conduit.

But that did not satisfy the opponents, and the Bill failed.

Six years later they came again. This case was of special importance as illustrating the real necessity of well gaugings being strictly kept. Mr. Whitaker was in the case. The millowners along a little stream opposed the scheme then promoted by the Oldham Corporation to sink wells for obtaining a supply for the town. This was on the Lancashire side of the hill, and nearer to their own town. The millowners, who possessed private wells, came with careful gaugings taken at regular intervals and showed how each man's pumping bore on the water levels of his neighbour's wells. When one pumped so many hours, and drew up so many gallons of water the level of his neighbour's well sank. The whole thing was gone into in detail, and showed what the available supply of water was in the strata proposed to be affected, and that application failed. Ultimately they obtained a supply of underground water which came from under the water area of another district, Rochdale, from disused colliery workings, and it was peculiarly pure water for the coal had run between two beds of rock, and when once cleaned out it was absolutely clear.

Those two cases illustrated the difficulties that might arise even when in the ordinary way one would not anticipate anything of the kind. No doubt Oldham thought there would have been no opposition to either of the schemes. Nobody had any interest in those old reservoirs, nobody knew until they got into the committee rooms that those careful gaugings had been kept by the millowners, and that it would be demonstrated almost mathematically what the precise effect of the works would be. Such an illustration showed how

important it was that gaugings of wells should be kept, as part of the larger scheme Mr. Wiseman had suggested seven weeks ago, viz., that they should have a complete record kept of their available sources of water supply, so that they should know how they were dealt with, and might gradually be able to build up a scheme for the regulation of water supplies throughout the country. The words of the Lord Chancellor in giving judgment in the Barnet case showed the importance of the question.

This Paper, together with the one the authors read four years ago, and the still earlier one of Mr. Shiress Will, gave them a complete compendium of the law as it stood; and many valuable suggestions had been made. He could not quite agree with the whole of the conclusions drawn, as he thought that the individual should have more protection afforded to him than had been suggested. The interests of every large community required that underground water should be applied for their benefit, but, where it was, compensation should be made to the owner of the soil from which the water was assumed to be drawn, by granting him a supply of a certain quantity at a reduced price which would obviate the necessity of his sinking wells or erecting any works of his own. He should have, he would not say first drink, but a right to have a share in that which was being taken for the common good, and his share should be recognised as being somewhat larger than the general property of the public which did nothing but subscribe funds to sink wells. If he got that, he got all he could fairly ask for; the public would get what they wanted and they would thus put in actual practice the American doctrine which seemed to him much more rational and sensible than the English one. In the States, as far as he had been

able to trace, wherever statutory regulations had not been laid down, it was not the common law of England, dating from 1840, which was adhered to, but the old Roman doctrine, "Use your own so as not to injure your neighbour," was the leading principle which was applied everywhere in settling these matters.

He was sure they would all be most grateful to the authors of the Paper for the care they had taken in collecting illustrations for the last few years. Those matters were not known to everybody; one would have to have a considerable acquaintance with what was going on both in the committee rooms and outside to get together all those details, and to bring them into a convenient form. Such a Paper was a great benefit to all of them, and he was sure the readers deserved the hearty thanks of that Meeting which he begged to move.

Sir A. R. STENNING (Past-President) said that it gave him great pleasure to second the vote of thanks so ably proposed by Mr. Harper to their friends Mr. Bidder and Mr. Graham, the joint authors of the Paper which Mr. Bidder had read. He did not know that as a surveyor he was in a position to discuss the intricacies of the water question, and he saw before him four or five gentlemen who were much more intimately acquainted with the subject of underground water than he could be. It was, however, most instructive to them as surveyors and agents that they should have that information put before them, so that they could advise their clients and protect their interests when notice was given by water companies or by promoters desiring to sink wells near their clients' property. It showed the necessity of being on the watch. In the Wandle case success

had been brought about by the watchfulness of Mr. Graham, who was concerned for an adjoining water company. He feared that the sinking of the wells would interfere with the company's supply, and he was enabled to take steps which proved conclusively that the sinkings did draw a certain amount of water from the wells from which his company were drawing their water, and he was enabled to get a judgment in their favour and stop the company drawing too much from them. That was very important and a matter which they were obliged to him for having brought before their notice.

The onus of proof of wells being depleted should certainly be on the company and not on the owner. He did not see why the owner who had generally got a much shallower pocket than a company should be put to the expense of proving something which it was most difficult to prove, but if the company in sinking their wells deprived an owner of his underground water he should, as Mr. Harper had suggested, have compensation in the way of water returned to him to make up for what he had lost. That seemed only fair and right.

He could speak of one case which he knew in Surrey, where a railway company driving a tunnel through a hill came across a water supply, and the owner said, "At present I get the water supply to my house from a spring above where your tunnel will be, and my supply will be very much injured by your tunnel," and before he would let them go on he got an agreement with the company that for one year before the works got to that particular point gaugings should be taken of the flow of that water, and that after the tunnel had been made and the works completed a further gauging for a year should be taken, and if there was any dimi-

nution they should pay him a round sum of money. This was done, with the result that it was found there was a considerable diminution of water running from the spring after the tunnel had been driven, and he received a large sum of money from the railway company for the deprivation of that water. The spring he thought was still running and supplied the house, but in a diminished quantity. That showed the necessity of gaugings being taken when any works were coming near one.

Of course it was always difficult to understand these underground supplies, but in a number of cases they had been traced out. Some of his friends laughed at him when he talked about water diviners, but these "dowsers," as they were called, did find water sometimes. At any rate the underground water question was a very difficult one to follow. They might hear something about that in connection with the Staines reservoirs, where there was a great question as to underground springs being stopped by the projected new reservoirs. That would shortly come up before Parliament.

He was sure they were very much obliged to the authors of the Papers for preparing it and for giving them the benefit of their research into the Acts of Parliament and decisions on the subject, and in seconding the vote of thanks he heartily joined with what Mr. Harper had said.

Mr. PERCY GRIFFITH (Visitor) said that as a visitor he wished first to express his appreciation of the courtesy of the Council in inviting him to be present and join in that very interesting and useful discussion. He understood that those who were not able to attend on the occasion of the reading of Mr. Wiseman's Paper were at

liberty to refer to that, and with the Chairman's permission he would do so. Mr. Baldwin-Wiseman had given them a mass of useful information. He had confined himself largely to facts, and had clearly proved, what he thought was now generally admitted, the urgent necessity for steps to be taken the better to conserve the water supplies of the United Kingdom, such steps including Government intervention.

Reference had been made by the author to the practice in America. That was extremely interesting, and they were often wise in learning lessons from their children, because their own great nation had been in the habit of, and had the reputation for, pursuing its public works and conducting its legislative action in a somewhat haphazard way. They sometimes managed to arrive at a good result in spite of that, learning first by experience how to frame their laws to suit the circumstances of the case. Other nations, more advanced in their views and theories, sometimes fell into the mistake of legislating upon theory and finding out the mistakes afterwards.

The chief interest of Mr. Wiseman's Paper was in his scheme for the organisation of a Government Water Department. As representing the Association of Water Engineers, he was extremely interested in that question, and some years ago he wrote a book in which he summarised some of the practical engineering features of the general waterworks law, and ventured to suggest a scheme for the formation of Water Boards. Looking at it again he was convinced of its crudity, but he had also been surprised that he had then been able to anticipate ideas which had subsequently been adopted by many others. One point which Mr. Wiseman had suggested was worthy of special attention, namely, that

in any Government Department appointed to deal with the national water supplies, there should be elements to represent all the interests concerned, such as navigation, canals, fisheries, riparian rights, drainage, and flood prevention, and although his Association was anxious that the subject of water supply should take precedence of all others, yet all must concede the necessity of making any general inquiry representative of every interest.

One other point worthy of attention arose on that Paper, and that was the necessity for simplification and not complication of procedure. Their present difficulties arose rather from complication and multiplication of bodies having more or less judicial powers, resulting in the confusion to which their attention had been so often, and again that night, directed. It was very important that in any scheme for further development on the lines indicated, an attempt should be made to simplify the procedure, and also, as far as possible, to reduce its cost.

They should bear in mind the three essential principles which should govern any steps in the direction indicated, that was to say, first it was necessary to ascertain the resources that were available, secondly to analyse the needs that had to be provided for (including, of course, all classes of needs), and then the ultimate object would be to devise a means of adjusting in the most economical method the resources to the needs. If those three principles were lost sight of they would find themselves involved in a complicated mass of detail from which extrication would be almost impossible.

He would like to ask the author one question on a point of detail; could he give them the area of administration for which he gave them the cost? If one could arrive at some comparative figure of cost per unit of

area it might be possible to utilise the experience of the United States in forming an estimate of the probable cost of such an organisation in this country, and that would be useful even if the figures were, as they must be, only approximate as regards accuracy.

He was pleased to see that Mr. Wiseman referred to the very important step recently taken by the Local Government Board in ordering a return of a more comprehensive nature than any that had previously been called for, either publicly or privately. The return was to include not only the supplies which were then afforded by authorised water authorities throughout the kingdom but was also to state the amount of water available. The obvious object of the inquiry was to ascertain to what extent the available resources were economically applied at the present time.

Turning to Messrs. Graham and Bidder's Paper, he would like to make a few remarks on the Water Supplies Protection Bill, as he had had the honour to represent the Association of Water Engineers before the Joint Committee which considered the Bill. He would afterwards refer to one or two points in the other parts of the Paper.

He must apologise if he confined his remarks to criticism, because although he could occupy considerable time in saying complimentary things about the Paper, yet he thought that criticism would afford the best material for discussion. He hoped, therefore, it would not be assumed that he was wishing to negative the value of the Paper as a whole. The authors in the early part of their Paper referred to the Bill as "a plucky attempt at constructive advance." Water engineers, at least, and no doubt representatives of other professions, would demur to that description of

that Bill. In fact, he ventured to suggest that the authors having, in subsequent portions of their Paper, agreed that amendment was necessary in so many important features of the Bill, had themselves admitted that it was rather a feeble attempt to accomplish what was desired.

He suggested also that the authors were a little hard on the Local Government Board. No doubt many of them could criticise the Board, principally on questions of time, possibly on their technical decisions, but generally he did not think that they ought to describe their supervision over waterworks undertakings and local authorities as "vague." He had had the opportunity of appearing at many local inquiries and he had found the inspectors anything but vague in the questions they had put to him, and he had generally found their supervision of a very practical nature indeed.

The authors referred to the imperfect information available as regards underground water. That was universally conceded, and he was sure they were grateful to them for urging the further collection of statistical data. The point he wished to make with regard to the Water Supplies Protection Bill was that in their report throwing out the Bill the Committee arrived at the conclusion that they could not legislate on the lines proposed without further information with regard to the water supplies of the country. That at least proved that the necessary information was not given to them by the promoters of the Bill.

Then there was a reference, in connection with the Wandle case, to the powers of local authorities under the general law, and it was suggested that they should not be exercised to give public bodies a perfectly free

hand. That, he believed, no one would ask for, but there was rather an important point which seemed to have been studiously avoided throughout the Paper (he thought it was only referred to in one paragraph) and that was the question of penalising water authorities in carrying out their statutory obligations. The whole tenor of the Paper, with the one exception he had referred to, was to protect the private owner from the operations of the water authority. Generally that would seem to be a one-sided view of the case, and while he had every sympathy with private owners, and thought that all water engineers would concede that in cases of specific injury the private owner should be entitled to compensation, still the water authorities might reasonably claim that similarly, when private works interfered with the public interests, there should also be some restriction on that side.

The reference in the Paper to the opposition of the small water authorities, which the authors confess to being unable to understand, was in his opinion due to the fear that the Bill involved an increase of the cost of promoting schemes of water supply. On that he might urge that all schemes were promoted primarily for the benefit of the community, and if that benefit were not present Parliament certainly would not sanction them. It was important therefore that no complication of procedure should cause greater difficulties to be placed in the way of the smaller local authorities in carrying out water schemes. It was not at all clear what the effect of the Bill would have been, and a great deal of conflicting evidence was given on that point; it was, however, claimed by the opposition that the cost of procedure should not be increased.

With regard to the onus of proof, the authors referred

to the fact that it was difficult to prove a negative; might he ask Mr. Graham as an engineer to admit at once that to prove a negative in such a case was not only difficult but impossible. The result of such legislation must necessarily be endless litigation, which, however profitable to professional gentlemen like themselves, would be extremely bad for the water authorities and consumers, who, in fact, represented the public generally.

The authors then referred to the main object in view being to secure the recognition of a right in underground water. That expression did not quite agree with the general tenor of the Paper, because the authors' complaint was directed to the right, which undoubtedly did exist, for water authorities to abstract underground water; therefore it was not the recognition of a right but rather the definition of the right which required further consideration.

The summary on the Bill at the end of the Paper was very interesting where the authors referred to the necessity for careful inquiry before large water schemes were carried out, and it was to the ensuring of such inquiry that immediate legislation should be directed. He ventured to suggest that the system of inquiry in force at the present time was not quite so futile as the authors suggested. Even the much maligned Local Government Board, in the one case quoted by the authors, gave a decision absolutely in accord with the authors' views, that was to say, they refused to sanction a loan on the ground that the works might interfere with private rights. He considered that the Local Government Board had fully justified their supervisory powers by that decision. The fact that in that particular case the authority concerned proceeded under other powers, and gravely threatened

the interests of private owners by means of works carried out without inquiry, did not in any way reflect on the efficiency of the Board's supervision.

Mr. BIDDER said they were the same powers; they raised the money differently, but the powers were the same.

Mr. GRIFFITH said he understood the work had been done out of the rates, which to his mind involved that it was done without any specific authority at all.

Mr. BIDDER said they raised the money differently, but the powers under which they sank the well were the same; all they went to the Local Government Board for was the loan.

Mr. GRIFFITH said if they carried out the works without inquiry he thought they would unanimously agree that those powers should be restricted; no one would assert that a public authority taking water for a public supply should be enabled to go where they liked, and do what they liked, without inquiry. That was a point they should insist upon under all conditions. He would suggest, however, that the existing methods of inquiry, in Committees on Private Bills, in inquiries on Provisional Orders, and with regard to Local Government Board loans, were not quite so inefficient as the authors suggested, and he should like to give a little more credit to the Local Government Board and also the Board of Trade for the value of their inquiries in specific cases.

He would like to refer to the Barnet judgment quoted by the authors, and to make a general comment on it. In that case the Lord Chancellor referred to the

interests of the public being jeopardised by special powers conferred on water undertakers. He would repeat his remark that the public water supply was a public interest, and the case in question was a case of private interests being sacrificed to public interests and not the reverse. The authors had claimed in a subsequent paragraph that the present practice in Parliament was satisfactory, and therefore he felt sure he should have their support in claiming that no alteration of the procedure was urgently called for at the present time.

With regard to the South Staffordshire Act, the onus of proof being on the Water Company in that case, he thought he was right in saying those clauses were conceded by agreement and not enforced by the Committee, which made rather an important difference, as Mr. Bidder suggested in reading the Paper. The precedent of the East Grinstead Act would be accepted by water engineers as an excellent one, and he would call attention to the word "effective" in that clause, which meant that the water rights which were open to receive compensation must be effective, in other words, compensation could not be claimed for a water supply which was impure. With that protection water engineers generally would accept such restriction very willingly indeed.

Mr. WHITAKER (Visitor) said that with regard to the Frimley case and the East Grinstead case he understood a definite radius was fixed, in the former of two miles and in the latter of two miles and a half; but they should all set their faces against any general radius being fixed, because what might do damage in one case might do none in another; they might have two very strong pumping stations within a mile of each other

and no harm done, whereas they might have two much smaller ones where harm might be done. There was no general rule, each case had to be considered on its own merits.

He differed from a previous speaker as to who should prove the damage. It was a very difficult thing to prove a negative. Supposing, for instance, the Chairman said he (the speaker) had picked his pocket, surely it was for the Chairman to prove it; he (the speaker) could not possibly prove the negative, he would not have the remotest idea how to set about it, and probably if the Chairman got a skilful lawyer on his side he would signally fail to prove it.

He would like to allude to the Waddon case, which was referred to by the authors of the Paper, because he happened to live in Croydon, and had been engaged in that case. So far as he knew, the scheme was not disapproved from any fear of affecting the Wandle. He believed the Local Government Board considered that there was some danger of possible contamination. Their decision had nothing whatever to do with the taking of water. He had great respect for the Local Government Board, and though in that particular case he thought they might have been wrong, he did not think the reason was anything like that suggested. He was happy to say that about a fortnight ago a permanent pumping station was opened there, a ceremony which he had the pleasure of attending, and that was now one of the definite water supplies of Croydon with a power of getting easily something like 1,000,000 gallons a day.

Let them look at it in another way. Supposing instead of the Croydon Corporation it had been a manufacturer who wanted that water, no Local Government Board, no Board of Trade, no Parliament, no anybody

could have stopped him getting it. Why should a public supply be put to so great a disadvantage as compared with a private one? That was really the cause of the failure of Lord Desborough's Bill; it made a total distinction between the two classes of consumer, to the disadvantage of the more important and the advantage of by far the less important of the two.

Instances were given during the course of that Committee as to the enormous character of private supplies, and the chief instance was a London one (he took care that it was given though he did not give it himself). The private supplies in London were enormous, far greater than had been thought. Years ago when the question was considered they had no knowledge what they were, but now they did know in one case at least, he meant one of the greatest pumping arrangements in the world, in the Kent part of the metropolitan area. They knew that the supplies taken for manufactories and for private purposes were as great as those taken for the public. It would be unfair to have one kind of legislation in one case and a totally different one in the other.

Again, they might sink and they might get water, but why should the law give them a special right to the water they found underneath their land; it was not made there, it might have come from many miles away, water that had fallen on other people's property. Why should the private landowner have a right to do what he liked with it? It seemed to him illogical.

In the end they would probably get some national ownership or national administration of water supplies in which everyone would more or less share, but because a man had the luck to have a bit of ground with a lot of water underneath that was no reason why that should

add to the value of his property up above, when perhaps he did not want the water and could not use it, unless indeed he were a large manufacturer.

He was engaged in the Oldham case for the promoters of the Bill, and the opposition to the Bill (as regards wells) was admirably conducted and it succeeded, probably he could allow now that it deserved to succeed. He had no conception when first entering into the subject that there were wells of the character that there were, or that there were records of them and such great knowledge in regard to them. That showed the value of collecting records of all sorts over long periods of years, in connection with water undertakings. He was often met with the want of them, and he had to tell people that if they had kept records and could give him some information then something could be done, but otherwise nothing,

A Paper such as the one they had heard read would be welcomed by all; of course they would differ on some few points, but they must agree fairly on the general principles, and they would heartily thank the authors for the trouble they had taken.

The vote of thanks having been put to the Meeting and carried unanimously, the further discussion of the Paper was, on the motion of Professor Henry Robinson, adjourned to the Meeting of the 24th April, 1911.

ANNUAL LICENCE VALUE.

By DONALD DINWIDDY (FELLOW).

*Read at the Ordinary General Meeting of THE SURVEYORS'
INSTITUTION held on Monday, 3rd April, 1911.*

LESLIE ROBERT VIGERS (President) in the Chair.

So much has been "tacked" on to the Finance (1909-10) Act, 1910, in regard to licensed properties, that the importance of the new value, called "Annual licence value," set up by that Act has not been fully appreciated either by our profession or by the Trade.

Licensed houses, whilst bearing all the rates and taxes that are levied upon properties in general, have in addition to bear an annual duty in payment for the monopoly to sell intoxicating liquors. This duty is, and always has been, levied upon the total gross value of the premises (land, structure, and licence), and the present enactment is a forecast of an intention to levy the duty on a fairer and more logical basis—that is upon the annual amount by which the licence enhances the value of the premises, or in other words upon the annual value of the State grant of a monopoly.

THE ENACTMENT.

The means to this end are set out in Section 44, Subsection 2, of the Finance Act, 1910, which reads as follows:—

“It shall be the duty of the Commissioners to prepare, and keep corrected, a register showing the annual licence value of all fully licensed premises and all beer-houses.

“For the purpose of this provision the annual licence value shall be taken to be the amount by which the annual value of the premises as licensed premises exceeds the annual value which the premises would bear if they were not licensed premises, those values being calculated on the same basis as that on which the amount to be paid as compensation under Section 2 of the Licensing Act, 1904, is calculated, in default of agreement and approval in cases where compensation is payable under that Act, but there shall not be included in the value of the premises as licensed premises any amount on account of depreciation of trade fixtures.”

EXISTING VALUES FOR DUTY AND RATES.

Before considering in detail this new value which the Commissioners of Customs and Excise are instructed to ascertain, no apology is needed for recalling the various values now attached to licensed houses, as such a course is essential to a clear understanding of how this new value differs from those already in existence.

The values for local rates, and for house duty, and Schedule A (Income Tax) are all ascertained from the

same data, but as—outside London—they are found by different authorities, they often differ. The gross estimated rental for local assessment is defined by Section 15 of the Union Assessment Committee Act, 1862, as:—

“ The rent at which the hereditament might reasonably be expected to let from year to year, free of all usual tenant’s rates and taxes, and tithe commutation rent-charge, if any.”

And the Valuation (Metropolis) Act, 1869, and the Acts governing assessments for Imperial taxation, all define the gross value in terms to similar effect.

In London the 1869 Act directs that the assessment in the valuation list shall be binding for both local rates and Imperial taxes.

Licence duties have in practice been levied since the Inland Revenue Act, 1880, on the highest of the three gross values, either in the rate book, or for inhabited house duty, or for Schedule A, and there is no machinery for arriving at special values for levying the licence duty.

It is interesting to note that by the House Duty Act of 1808, the assessment for house duty must not be less than the gross poor rate assessment; the gross value is also the basis of the compensation levy under the 1904 Act.

This practice of levying the duty upon the highest gross value was temporarily upset by Section 44, Sub-section (1) of the Finance Act, 1910, which enacted that—“ In the determination of that value, the duty on the licence is not to be allowed as a deduction,” which, according to the judgment in *Wrigglesworth v. Rex*, set up a special annual value for licence duties both within and without London; but this is now only of

academic interest, because Section 4 of the Revenue Bill, 1911, repeals this subsection and brings the basis back to the Inhabited House Duty or Schedule A assessments.

EXISTING TAXATION.

The taxation levied upon a public-house now averages as much as the total value of the house, as the following sample figures prove.

Assume a "free" public-house assessed at—

	£		
Gross value	200		
Rateable value	167		
		£	s. d.
Licence duty, 50 per cent. of £200	100	0	0
House duty, gross value, £200 at 6 <i>d.</i>	5	0	0
Property tax, £200, less repairs one-sixth, £33 6 <i>s.</i> 8 <i>d.</i> = £166 13 <i>s.</i> 4 <i>d.</i> at 1 <i>s.</i> 2 <i>d.</i> ...	9	14	6
Rates—Rateable value, £167 at 8 <i>s.</i>	66	16	0
Compensation levy (say)	20	0	0
Total duty, rates, and taxes	£201	10	6
Of which the landlord refunds to the tenant—			
Property tax	£9	14	6
(Say) half compensation levy... ..	10	0	0
		19	14 6
"Free" tenant's duty, rates, and taxes	£181	16	0

Therefore before a licensed victualler can afford to pay £200 rent he must satisfy demands for duty, rates, and taxes of an amount nearly equal to that rent.

My experience of the value of licensed houses has

largely been gained in the arena of assessments, and 700 houses have passed through my and my partner's hands during the last 12 months. In acting mainly for the rating authorities it has been impossible to withhold sympathy from the licensees and brewers in respect of the heavy imposts of the 1910 Act on the top of a depression in sales, and (to the community) a welcome wave of sobriety. A general decline in assessments has resulted from this double cause, but with the forecast and hope of licence duties being levied upon the more equitable basis of "Annual licence value," and the lower scale which this basis implies, it may in the future be competent for the rating authorities to restore some of the lost assessments, which have resulted in a loss of £370,690 rateable value in the County of London this quinquennial.

A new licence is now almost impossible to obtain, and then only on any conditions which Quarter Sessions may be pleased to impose, and the payment of heavy sums for the monopoly value. Consequently no new licences have been granted in London since the 1904 Act without substantial annual payments in respect of the monopoly value. The Trade can have no proper objection to these conditions for new licences, but the position is altogether different when the licence has been held for generations, and perhaps tens of thousands of pounds has been paid for the property on the reasonable expectation that the licence will be continued for as many more generations, and it is the sudden partial confiscation of this vested interest for which hard cash may have been paid, by an arbitrary increase of the annual payment to the State, that creates the hardship of which the Trade (and consequently the rating authorities) bitterly complain. .

One word on the political-economy side of the Licensed Trade. It can hardly be denied that it is in the interest of the licensee that he shall exert his powers to induce his customers to swell his trade, and he is subject to the unhealthy temptation of enticing the sale of his liquors within the limits of police supervision. This pushing of his wares is the more necessary now that he has to meet such increased burdens, whilst on the other hand experience has taught him how difficult it is to increase the prices of the commodities he sells. This, then, is the thought in the minds of those legislators who are seeking to make the Trade a state monopoly.

FUTURE APPLICATION OF "ANNUAL LICENCE VALUE."

It must be inferred that the Legislature would not set up the machinery for determining and registering the "Annual licence value" of every public-house in the kingdom if that value were not going to be applied to future taxation. In fact, the Government have stated in the House that when the register is completed they intend to base future duties upon the "Annual licence value" in place of the present drastic taxation of one-half and one-third of *annual* value. This present rough-and-ready basis is admittedly a tentative method of increasing the duty, after the failure of the Licensing Bill of 1908 to become law, and pending the completion of the register of "Annual licence values."

On the other hand, the register may be applied for the purposes of capitalisation for compensation under the 1904 Act, or ultimate State or municipal purchase.

The importance of this "Annual licence value" to brewers, licensees, and freeholders cannot, therefore, be overestimated.

The register is now in course of preparation by the Commissioners of Customs and Excise, and all licensees have been requisitioned to fill in Form LL1, to provide the Commissioners with the fullest data to enable them to fix the "Annual licence value."

It is important to notice that this first-quoted subsection only refers to fully licensed premises and beer-houses, and so excludes off-licences of every description.

No duties are levied upon "Annual licence value" by the 1910 Act except in the two undermentioned special cases, under the "Provisions applicable to retailers 'On' licences." Paragraph 3.

1. Upon licensed houses exceeding the annual value of £500 the licensee has the option of paying one-third of the "Annual licence value" in place of the half (upon fully licensed houses), or the third (upon beer-houses) of the *annual* value, provided that the duty shall not be less than £250 in the case of a fully licensed house, or £166 13s. 4d. in the case of a beer-house, being one-half and one-third respectively of £500.

2. The duty is also one-third of the "Annual licence value" in the case of certain "season" hotels, with a minimum duty of £30 to £50.

EFFECT OF 1904 ACT.

Our first impression is that the Legislature has set us the comparatively simple task of dividing the total free rental value (*i.e.*, the assessment) into two parts, one part for the value of the licence, and the other part for the value of the premises as if not licensed. But when, as the 1910 Act directs, we turn to the Licensing

Act of 1904, and the methods adopted in arriving at the compensation for the extinction of licences under that Act, we find that the task is by no means uncomplicated.

Section 2 of the Act of 1904 enacts:—

“Where Quarter Sessions refuse the renewal of an
“existing ‘On’ licence under this Act, a sum equal to
“the difference between the value of the licensed pre-
“mises (including depreciation of trade fixtures) and the
“value which those premises would bear if they were
“not licensed premises, shall be paid as compensation to
“the persons interested in the licensed premises.”

If in the above section the word “annual” be prefixed to the word “value,” we approximate to the section of the 1910 Act first above quoted.

“KENNEDY” JUDGMENT.

There has been an important test case interpreting Section 2 of the 1904 Act, known as the Ashby’s Staines and Cobham Brewery cases (95 L. T. R., 260; *Professional Notes*, xiv., p. 89).

Mr. Justice Kennedy’s famous judgment was to the effect that:—

“The mode of arriving at the amount of com-
“pensation is to ascertain the market value of the pre-
“mises as licensed premises, adding the depreciation of
“trade fixtures by reason of the non-renewal of the
“licence, and deducting the value of the premises
“without a licence; but there is not to be included
“in the compensation any sum representing the interest
“of the tenant or any other interest in the premises.

“ And if the owner is not a brewer and he lets the licensed premises to a tenant, it may be presumed that such owner gets the true rack-rent of the premises as licensed premises, and in such cases the market value may be obtained by a capitalisation of the annual value based upon that rent. But if the owner is himself the occupier or if the owner is a brewer and lets the licensed premises to a tenant as a ‘ tied ’ house, in which case the rent paid by the tenant is less than the rack-rent, and a calculation of value could not be based upon it, then it becomes necessary to take evidence of profits and evidence of the average amount and quality of liquors supplied to the house, and having thus obtained the annual profit and the annual rent which a tenant would be likely to give, the market value of the premises *qua* licensed premises is to be obtained by a capitalisation of each of these sums by a number of years’ purchase which will vary according to circumstances.”

In applying these principles the learned Judge in the case of a fully licensed house let as a “ tied ” house capitalised the brewers’ annual profit on liquors at 10 years’ purchase, adding 18 years’ purchase of the rent, and a sum for depreciation of trade fixtures, and deducting the value of the house without a licence.

In the case of an *ante* 1869 tied beer-house the compensation was assessed in the same way, allowing 11 years’ purchase of the brewers’ annual profits.

The following is a fair sample valuation for compensation for extinguishing the licence of a small tied beer-house under the 1904 Act (prior to increased

duties by the 1910 Act), based upon the Kennedy judgment:—

Brewer's Profits—

Beer, average, 366 barrels per annum		
at a profit of 10s. a barrel = £183		
× 10 year's purchase = capitalised	£	£
value... ..		1,830
Capitalised value of tied rent, £35 ×		
18 years' purchase		630
Total value ...		2,460
Add depreciation of trade fixtures ...		80
		2,540

Deduct value of premises if without a licence—

Estimated net rent, if occupied for		
some other purpose than for sale of		
intoxicating liquors, £25 × 14½		
years' purchase	360	
Less estimated cost of conversion ...	120	
		240
Total compensation ...		£2,300

If this house had been in private ownership and let to a "free" tenant, it would have had to be let on repairing lease at £123 per annum in order to produce a capitalised value of £2,460. In my opinion the "free" net rental value would not have been more than half that rent, and if the house had been let at a "free" rent instead of a brewer having been interested in the property, the compensation would have been much less.

“FREE” RENT AND BREWERS’ RENT COMPARED.

We clearly have two rental values of a public-house, two values which may differ as wide as the Poles:—

1. The “free” rental value to a licensed victualler as occupier of the premises, having regard to the gainful trade resulting from the retail sale of liquors, &c., on the premises, with rights to buy in the open market, unfettered by extraneous considerations of tie.
2. The rent which a brewer would give for the premises in order that he may fetter the licensed monopoly by injunction that only his own liquors may be sold. The rent which he will pay, in competition with other brewers, will have regard to the profits he can make at his brewery and wine vaults in addition to the retail profits at the house.

This second and fictitious value must always be higher, much higher, than the first, consequently “free” houses are getting more and more rare, because brewery companies will always outbid a private owner or licensed victualler either to rent or to purchase a licensed house, and it was the brewers’ reckless competition for tied business that sent up the value of licensed properties in the boom of 1898-9 to prices which to-day we call ludicrous.

In assessments of licensed houses, the case of *Bradford-on-Avon v. White* (1898, 2 Q. B. 630) rules out a rent which a brewer may be paying except so far as it may screw up an occupying “free” tenant’s rent.

So also I submit must the brewers' rent be ruled out when determining the annual value of the premises as licensed premises in accordance with Section 44, Sub-section (2) of the 1910 Act first quoted, except so far as the fact that brewers being competitors for the house would screw up an occupying "free" tenant's rent, leaving a minimum of profit to the tenant.

The great majority of London public-houses being "tied," the compensation which has been paid on the extinction of 433 licences in London under the 1904 Act in the six years 1905 to 1910 must mainly have been upon the "Kennedy" basis of capitalising the brewer's profits, and the London County Council's returns prove that the total compensation paid in London has averaged 33 years' purchase of the rateable value. It must be remembered that this 33 years' purchase has been paid only for compensation for the extinction of the licence plus the depreciation of the premises and of trade fixtures, while the ownership of the premises remains undisturbed—nor can it be suggested that public-houses have been generally underassessed in London.

There can be little doubt that this high scale of compensation must have raised the fond hope of finding large "Annual licence values" on which to base future duties, and the marrying of the compensation provisos of the 1904 Act to the Act which we are now considering makes this assumption the surer.

Though my reading of the Act is that the starting value is the "free" rental value to a licensed victualler, and not the rent which a brewer will pay, the Commissioners may attempt to bring the capital compensation value of a "Kennedy" valuation to a rental equivalent, and

taking the same beer-house example referred to above, the "Annual licence value" might be claimed to be:—

The *Brewer's profits* of 10s. a barrel on
366 barrels per annum = £183

But so simple a calculation will not stand investigation, because—

Firstly, no brewer would pay £183 additional rent for a house from which he is going to make £183 in beer profits. In order to obtain a property capable of producing 10s. a barrel profit, I suggest no sane business man is likely to give more than half the profit in rent. Such a proportion is illustrated by the fact that for compensation the trading profit is multiplied by 10 years' purchase, whereas it may be assumed that a rent would be multiplied by 20 years' purchase.

Secondly, the continued decline in beer sales throughout the country reduces the brewers' receipts without reducing the manufacturing cost *pro rata*; and in addition there is the extra brewers' tax of 12s. per 50 barrels (approximately 3*d.* per barrel), so the profit per barrel at the brewery must be less than it was a few years ago.

Thirdly, a licence duty of only £3 10s. was regarded when arriving at an average profit of 10s. a barrel plus the tied rent of £35, whereas this duty is now increased in London and large towns to a minimum of £23 10s.

Taking these points into consideration, a *brewer* might be willing to give a rent for our sample beer-house based upon the following calculation:—

If brewer's profit, *ante* Budget, were 10s. a barrel, I think, for reasons above stated, the brewer's profit to-day would not be more than 9s. a barrel.

	£	s.	d.
<i>Brewer's rent</i> (say half the profit of 9s. a barrel)—			
366 barrels at 4s. 6d.	82	7	0
Tied rent	35	0	0
	117	7	0
From which must be deducted the increased duty, say ...	15	0	0
Rent which a brewer would give	102	0	0
Deduct value of land and build- ings, as if occupied as a beer- house	40	0	0
"Annual licence value"	£62	0	0

Upon this basis the "Annual licence value" would approximate to the gross rent which a free tenant would give, *i.e.*, the gross value.

If, in estimating "Annual licence value," the brewer's profit basis were adopted for "tied" houses, and the "free" rent basis were adopted in "free" houses, I suggest that anomalous inequalities are likely to result.

In rare cases we find the gross value of a licensed premises actually less than the gross value of adjoining unlicensed premises of the same size. In such rare cases the licence is actually a burden on the property, and does not enhance the value. The "Annual licence value" of such a property may therefore be nothing.

UNLICENSED VALUE.

The 1910 Act directs that nothing is to be included for depreciation of trade fixtures. The reason for this is obvious, that as the property is to remain as licensed premises the trade fixtures are not reduced to scrap value.

An essential part of the estimate of "Annual licence value" is the estimated value of the premises if they were not licensed, because we remember the "Annual licence value" is defined in the 1910 Act as "the amount by which the annual value of the premises as licensed premises exceeds the value which the premises would bear *if they were not licensed premises*," and the 1904 Act (to which the 1910 Act directs us to refer) reads "the difference between the value of the licensed premises and the value which those premises would bear *if they were not licensed premises*."

The purport of the two Acts is to find values under diametrically opposite conditions. The 1904 Act assumes that the licence is to be extinguished, whilst the 1910 Act assumes that the licence is to be continued. In the earlier Act therefore the value of the premises "*if they were not licensed*" is and ought to be taken at the value for some other purpose than a public-house, and any outlay required to be spent on conversion of the property must be allowed; but under the 1910 Act the value of the premises "*if they were not licensed*" ought to be taken at the value as adapted for occupation for the continuance of a licensed victualler's trade.

To make my argument clear, I take an extreme illustration. It will not test your flights of imagination to

think of a gin palace the structure of which could not be adapted to any other purpose. Under the 1904 Act the value of the premises, if the licence were confiscated, might rightly be little more than the site value, and it would be right to deduct but little more than the site value in order to find the balance for compensation for the extinction of the licence; but if in a valuation for "Annual licence value" little more than the rental value of the site were deducted from the total rental value, an "Annual licence value" far in excess of the actual annual value of the licence would result.

If, therefore, the strict language of the Act were followed, the more unadaptable were the premises to ordinary user the higher would be the "Annual licence value," an anomaly very far from the intention of the Act.

The language of the Act is however so explicit (especially coupled with the reservation that nothing is to be included for depreciation of trade fixtures) that the Commissioners may seek to increase the "Annual licence value" by restricting the value of the land and buildings to the lower value necessarily adopted under the 1904 Act as if the premises were no longer to be used for the purpose for which they were constructed.

We might then have the recent dictum of Mr. Justice Channell in the *Wrigglesworth* case (when confirming another part of the 1910 Act) repeated, that "This is " obviously unjust, and such as one would not think any " body of honourable men could deliberately have in- " tended"; and the necessity would again arise for the Treasury to set wrongs right by a later enactment.

The confusion has arisen by the draughtsman attempting to apply an Act for determining capital value for compensation, to an Act for determining

annual value, and it is greatly to be hoped that the Commissioners will at once accept the just interpretation of the Act and deduct the value of the premises as adapted for the continuance of a licensed victualler's trade, rather than press for the letter of the Act.

CONCLUSION.

To summarise it seems to me that the "Annual licence value" must be arrived at upon the following lines:—

1. The total annual value of the licensed premises must be estimated in the same way as the law directs the assessment value to be found, that is, the rent which a licensed victualler would give for the premises unfettered by "ties" and with power to purchase his goods wholesale in the open market, remembering (*Bradford-on-Avon v. White*) that the competition of brewers with extraneous motives would screw up the rent against an occupying tenant.

2. Deduct from the above value that part which is due to the land and buildings, not the depreciated value of the 1904 Act, but the value as if the premises continue occupied for the sale of intoxicating liquors.

The balance represents "Annual licence value."

I desire to acknowledge the assistance of my partner, Mr. Conrad Dinwiddy, in preparing this Paper.

Mr. J. D. WALLIS (Fellow) said he had great pleasure in proposing a vote of thanks to Mr. Dinwiddy for his excellent Paper. The author had taken as his text three words out of the Finance (1909-10) Act, 1910—three very important and far-reaching words—and he had produced a most interesting and suggestive Paper, and

they were all indebted to him for the lucid way in which the many important points involved had been presented to them. Before referring to the words of the Act, he would like to ask what, in ordinary everyday language, was meant by "annual licence value."

He thought it meant the additional value given to premises by the grant of a licence to sell intoxicating liquors, or, as Mr. Dinwiddy put it, "the annual amount " by which the licence enhances the value of the premises, " or in other words, the annual value of a State grant " of a monopoly."

He (the speaker) thought that "annual licence "value" was the same thing as the "monopoly value" referred to in the Act of 1904, and should differ from the "compensation value," which was the value of the licence added to the depreciation of the premises due to the extinction of the licence. But when one came to consider the sections of the various Acts it was very difficult to see any real difference in the wording.

First of all, in the Finance Act, the "annual licence "value" was "the amount by which the annual value " of the premises as licensed premises exceeds the annnal " value which the premises would bear if they were not " licensed premises"; then Section 20 of the Licensing (Consolidation) Act, 1910, which superseded the Licensing Act, 1904, referring to compensation, specified it as "a " sum equal to the difference between the value of the " licensed premises and the value which those premises " would bear if they were not licensed premises"; and then "monopoly value" was defined in Section 14 of the Consolidation Act, 1910, as "the difference between the " value which the premises will bear when licensed and " the value of the same premises if they were not " licensed."

It was difficult if not impossible to see any real difference in the meaning of those definitions, except as between "annual" and "capital" value, but there was one qualification as regards "monopoly value," and that was that the justices when fixing that value were to have regard to the proper provision of suitable premises. That meant, he presumed, that in fixing monopoly value the justices were to take into account the cost of providing proper and suitable premises for the carrying on of the trade. It was clear that after providing suitable premises an applicant for a new licence would not give the same sum that he would expect to receive as compensation for the loss of an existing licence, which loss would render the premises themselves almost useless, or at any rate very much reduced in value.

He referred to monopoly value, because in his opinion that was the same thing as the "annual licence value" referred to in the Finance Act. It must be borne in mind, however, that the "annual licence value" had to be ascertained by two separate values, both of which would appear in the certificate. Those two values were the annual value of the premises licensed and the annual value of the premises unlicensed.

He would like to say a few words about the annual value of the premises as licensed premises, because he considered that value should always be arrived at on the same basis. He had always taken the view that the value of licensed premises was the same, whether in the hands of a brewer or a private person, and that when they were ascertaining the market value of premises as licensed premises the value should be the same whether they were considering it as a factor in a calculation for the assessment of compensation or for the assessment of rating or duties. He did not suggest that any particular property would

have the same value, whatever the purpose for which it might be valued; that was not so, but here they had to ascertain the ordinary market value of the premises as licensed premises. That was merely one factor which was afterwards applied to various calculations. They had the words of Mr. Justice Kennedy defining this value as "the price which the owner of the freehold of "the premises might expect to obtain for them *qua* "premises enjoying the privilege of a licence if sold in "the open market." A private owner was entitled to say that the value of his premises was measured by the price he could get in the open market either from a free tenant, or from a brewer, or any other person; and a brewer was entitled to say that the profit he made was not the measure of the value of his premises, that part of his profits depended upon considerations which were personal to him, and that he should have a reasonable allowance in respect of the manufacture of his beer.

He agreed with Mr. Dinwiddy that a brewer who was making a profit of 10s. a barrel could not pay the whole of that sum as rent; he must have a reasonable return for his interest, profit, and risk. What he thought they had to find was the best rental which the premises with the licence would command in the market, having regard to the trade done and to the fact that a brewer would probably give a better rent than any other person would give.

In the Kennedy judgment, where the Judge was finding not the annual value but the capital value of the premises as licensed premises, the judgment was based on the brewers' profit, which was quite a different thing to annual value or rent, and indeed it was not taken on the basis of rent, or on the number of years' purchase that would be applied to rent but upon a much smaller

number of years' purchase; it was also based on the tied rent, which again was not annual value but an arbitrary sum fixed by the brewer. By these means Mr. Justice Kennedy arrived at the capital value of the premises as licensed premises, that was the value in the open market; and the author had given an example valuation which was a clear and correct example of the principles of Mr. Justice Kennedy's decision.

Mr. Dinwiddy had found a total value of £2,460 and proceeded to show that, if capitalised at 5 per cent., that amount should represent a rental value of £123 a year; but he had suggested that the actual rental to be obtained would not be more than half that sum, or £61 10s., which would mean that the compensation the brewers would receive on that basis would be 40 years' purchase or very much more than they ought to receive. He (the speaker) ventured to think that either the capital value on that basis was too high or the rental value was too low. It could not be disputed that Mr. Justice Kennedy's object in that case was to find the market value, not the value to the particular brewers, and he used the profits as the basis because he had no rack-rent upon which he could justify a calculation as to the value of the premises. The following were the words he used: "It cannot be right for the tribunal which has
" to ascertain the market value of licensed premises to
" refuse to admit evidence of profit which the possible
" purchaser would certainly treat as a most material
" factor in the formation of a right judgment as to the
" value of the licensed premises."

So here, he thought, in ascertaining, in the first element of the calculation, the annual value of the premises as licensed premises, they were doing it under

exactly the same conditions as were laid down by Mr. Justice Kennedy in his judgment, and they had to find the value to a possible purchaser or to a possible tenant. For those reasons he (the speaker) could not quite follow Mr. Dinwiddy in his reference to two values "which may differ as wide as the poles."

It might be that the Kennedy judgment was too high. Of course in saying that he did not presume for a moment to criticise the decision, but the judgment was given in 1906 on the merits of a particular case and before the increased licence duties were imposed. Those new duties must have an effect upon the values to-day and they had to be considered, but making every allowance for that he did not think it could be contended that brewers in formulating an estimate of the compensation that was due to them for the loss of the licence should estimate the value of the premises on one basis, that was to say on the basis of profits, and that when they were estimating the value of the premises for the purpose of taxation or duties they should estimate on an entirely different basis, namely, the value to a free tenant, leaving out of consideration the fact that the great majority of the houses were owned by brewers and occupied by them through their tied tenants.

It was no doubt a difficult and complicated subject, but his view was that the value of premises as licensed premises should be the same whether in the hands of a private owner or brewer, or whether calculated for the purpose of ultimately finding the compensation, or for the purpose of assessing duties or for rating.

With regard to the methods of finding the "annual licence value," they had frequently in the north of England used the method of basing the annual value upon a percentage of the takings, a varying percentage

according to circumstances. In his part of the country they had often taken 10 per cent. of the takings, or it might be 9, 8, or 7 per cent., according to the proportion of the takings that were due to the sale of drink and the proportion that might be due to the sale of other commodities. That was a method which had been used to a great extent.

The method suggested by Mr. Dinwiddy of taking the rental value at 4*s.* 6*d.* a barrel and adding to that the tied rent appeared to him (the speaker) to be a fair and proper method of arriving at the annual value of the premises. Then, of course, they had Mr. Justice Kennedy's method, which was a means of arriving at the capital value. But whichever were adopted it should be a method which by multiplying the annual value by the proper number of years' purchase would give the capital value, or by dividing the capital value by the proper number of years' purchase would give the annual value.

With regard to the second value, the value of the premises unlicensed, he agreed with Mr. Dinwiddy that that value would differ from the value to be applied for compensation purposes, because in the latter case compensation would have to be assessed for depreciation in the value of the premises, and for the fact that the premises would have to be altered and adapted to a purpose for which they were not originally intended.

The buildings should be considered as premises suitable for the purpose of a licensed trade, but he did not quite follow Mr. Dinwiddy's suggestion that a licence could ever be considered as a burden; the premises must be valued having regard to the purpose for which they were used, and if the premises had a greater value for other purposes that value should not affect the value of

the licence, which, after all, really depended not upon the value of the premises but upon the amount of trade done.

He would leave others to deal with the many other interesting points that arose on the Paper, and would conclude by proposing a hearty vote of thanks to the author.

Mr. CUTHBERT LAKE (Fellow) said he had much pleasure in seconding the vote of thanks to Mr. Dinwiddy for his bold and valuable Paper. He endorsed the warning as to the probable use which would be made of the Annual Licence Value Assessments in the new Licensing Bill which has been promised.

He was in agreement with the reader of the Paper upon the method of arriving at the basis of assessment, but the special circumstances of each house would have to be taken into consideration, and the true tied rent or true free rent must be calculated in each case, and the varying profit credited upon barrellage and gallonage. These valuations could not be simple matters, but in London perhaps it would be found more simple to deal with the true tied rent plus the proportion of the trade, as such a course was almost invariably followed in the compensation cases under Section 20 of the Licensing (Consolidation) Act of 1910.

He entirely concurred with the author of the Paper upon the question of the value unlicensed. Annual value and capital value bore no relationship to each other for the purpose of assessment, and the annual unlicensed value of a property for the purpose of assessment should certainly bear a close relationship to the annual value of the land and buildings for the purpose of carrying on the licensed trade.

Valuers might usefully take a broad view of the whole problem involved, for they had duties not only to their clients but also to their country, and could aid its governors in the framing of the laws of the kingdom. He suggested that modern legislation had not fully realised the changed conditions of the licensed trade, and that the general public did not understand them. The constant misuse of the words "monopoly value" was a clear example of that—the owner of a licensed property did not possess a monopoly, but merely a limitation of the number of his competitors in the trade of distributing a particular commodity in a particular manner, and, as part consideration for such limitation, his property was subjected for the convenience of the community to many onerous restrictions in addition to excise and licence duties.

The curbing of intemperate indulgence would be better achieved if, in place of increased licence duties, there were imposed upon the trade a system of licensed house administration similar to that already adopted by many public-house trusts throughout the United Kingdom. Modern legislation appeared to stamp the tavern as a boozing-den and did nothing to aid it to become anything else, but the properly regulated tavern should be a natural meeting place for public and rational recreation and refreshment, and the first object should be to entertain and refresh the customer, irrespective of whether his demand were for an intoxicating or non-intoxicating liquor, or for food or rest. This was the main object of the public house trusts, and it involved the provision of greater floor space relatively to bar space, and the supply of solid as well as liquid refreshment in premises which needed to be kept better lighted, better ventilated and more rationally decorated than the

drinking places which the temperance advocate properly condemned.

The licensing authorities did their best to aid these objects, but their hands might well be strengthened by legislation. He submitted that, in order to arrive at "annual licence value," some credit should be given to the owner who provided wholesome accommodation, food and recreation, as against the owner who gave no more than a drinking place, and that credit for some such intention must be given to the framers of the Act.

Mr. HENRY HAYWARD (Fellow) desired to express his acknowledgment to Mr. Dinwiddy for the pains and care he had taken with his Paper. He agreed with the author that very few of them quite appreciated the effect of "annual licence value." During the last year, owing to the excessive licence duties put upon properties, valuers had been very busy endeavouring to get down the assessments, and that being so they had rather looked at the present instead of the future.

He quite agreed with the conclusion arrived at by Mr. Dinwiddy that the "annual licence value" could only be reached by obtaining the difference between two sets of figures (1) the value of a licensed house, and (2) the value of that house unlicensed, and for this work expert opinion was necessary.

Part II. of the Finance Act had been framed upon the idea that it would work in with the 1904 Licensing Act. The 1904 Act in his opinion was a most excellent Act; it was framed in the interests of temperance and was conceived in a very fair spirit indeed. Undoubtedly there had been and still were areas containing too many public-houses, and the Act acknowledged that while the licence was an annual licence, yet there was a custom which had been at work for a great many years whereby

properties had been acquired by brewers, so as to give them practically a freehold interest in the licence, subject, of course, to good behaviour. That had been confirmed by Mr. Justice Kennedy, and they had since worked on the principles of his judgment. He might say that personally he had had no experience in London; his practice dealt with country houses both for assessment committees and brewers, and he was therefore speaking as a country surveyor and valuer.

In his opinion the two Acts could not possibly be dovetailed together. The compensation given under the 1904 Act was a compensation for trade taken away from the brewer; one could not convert that trade and its capitalisation into an annual value. He ventured to think that Part II. of the Finance Act instead of being in the interests of temperance was quite the reverse. The amount of duty and licence, together with the amount of harassing which the trade had to put up with made it almost impossible to make a living from it by simply confining it to what one might call legitimate trade. It seemed to him to have been forgotten that before liquor got into the hands of the retailer the Government had already had 14s. 9d. out of every gallon of spirits by way of duty, and about 8s. per barrel of beer; the publican could not possibly increase his prices; he had tried it, but had failed; and consequently what was probably a fair living ten or twelve years ago, before the additional duties were put on, was not so to-day; the heavy licences were absolutely killing the trade.

With regard to the question of the "annual licence value," he maintained that if the Government wanted, as evidently they did, to get a licence duty from the trade it was no use talking about the annual value. The right

course was to do as they did in Canada and abroad, namely, to take a certain percentage upon the amount of the liquor trade done. That was a fair and proper way to go to work; one had something definite to go upon. He had always maintained that the way so many assessment committees acted was wrong. They took the tied rent of the house, added to it so much per barrel for the trade, and said that that was the "gross estimated rental" value.

Another feature of the Finance Act was that it created another basis of assessment. In the country they had four or five different values already. London was more fortunate as it had only one basis for Imperial taxes and local rates.

What was wanted, he thought, was simply the "gross estimated rental"—the amount at which the house would fairly let as a licensed house; not from the trade it did, because that was unfair, it was taxing the industry of the man who was in the house. If one were to take two houses in the same street within a door or two of each other, as was often the case in the country, with the same accommodation and almost the same elevation, those two houses would have the same area to draw their trade from, and yet one would find that A in one of the houses, a good man of business who understood his work and had a number of friends, was doing say six barrels a week, and B in the other house would not be doing more than two and a half or three barrels a week. Why should the rating of those two houses be different? If A moved into B's house the trade would go with him. One could not say that the value of the house had gone up.

He therefore contended that to base any annual value upon the trade done was absolutely wrong. In this particular instance the way in which it was proposed to go

to work created quite as much confusion as the way of arriving at "assessable site value" in the first part of the Act. First of all one had to arrive at the rental value of the premises as a licensed house—just what A, B, or C would give for it. It required expert knowledge to arrive at that figure, and it was if anything a still more difficult task to arrive at the value of a licensed house as though it had no licence attached to it. He (the speaker) did not quite see how they were going to do it. They could not take the value of the bricks and mortar and the land. Very often a house was put up the rental value of which, including the licence, would not be worth 5 per cent. upon the outlay on the buildings and the land. Consequently there were two most difficult valuations to make to arrive at the "Annual licence value." It was no use making two complicated calculations, and then saying the difference between the two was what was wanted. The most equitable thing would be for every man to pay a fair licence duty according to the trade he did. That seemed to the speaker to be the solution of the difficulty.

Mr. C. J. Fox (Fellow) said the particular aspect of the subject which he wished to bring before the meeting was the question of the tied rent. What was a tied rent? As Mr. Wallis had very properly said it was an arbitrary rent; there seemed to be no way of fixing it. He did not know how it was done in London, but in the north of England it was a very arbitrary rent and differed from a nominal sum up to almost the free rent value. He had never heard it explained, but seeing that it was the foundation upon which all valuations were made, he thought there should be some understanding as to how it was arrived at. He himself had tried to standardise it in compensation cases under the 1904 Act,

and he had found that to be the best way, because in one case one might take one public-house and find the tied rent £20, and in another house, similar in all respects, one would find the tied rent £30. The point was a material one in working out the figures, and he offered the suggestion for the consideration of those gentlemen concerned in these valuations.

He had been very pleased with the Paper ; it was one of the most able he had ever heard, and the figures were clear and uncontrovertible.

Mr. J. MARKS (Visitor) said that he was very pleased to be able to offer a few remarks at the invitation of the Chairman, although he had not come prepared to speak, but simply as a listener and learner. He quite agreed with the remark of Mr. Wallis that the value of licensed premises was always the same whether in the hands of a brewer or in the hands of a retailer, and he thought that was evidenced to a great extent by the fact that at a public sale by auction one found a retailer and a brewer in competition, and sometimes the brewer became the purchaser, and sometimes the retailer. That was more than conclusive evidence that the value of licensed premises was the same whether in the hands of a brewer or a retailer.

On page 409 Mr. Dinwiddy made a statement that " In London the 1869 Act directs that the assessment in " the valuation list shall be binding for both local rates " and Imperial taxes," and in his conclusion Mr. Dinwiddy really arrived at the "annual licence value" on that basis ; but he (the speaker) was afraid that was not the way in which the Commissioners of Inland Revenue were assessing the annual value of licensed premises. He noticed that there were two or three eminent gentlemen from Somerset House present, and he would be glad if

their official position did not deter them from enlightening the meeting. It would be very useful to all to know how the Commissioners arrived at their valuation. He had in his hand a notice which stated that the annual value of certain licensed premises in London was put at £1,000 and the annual value of the same premises unlicensed at £800; £200 therefore was the "annual licence value." After a very severe contest that very property had within the last few weeks been assessed at the gross assessment of £510. Notwithstanding the fact that the Assessment Committee, who were acquainted with all the facts, and he ventured to say better acquainted with them than the Commissioners of Inland Revenue, themselves had assessed the premises gross at £510, the Commissioners had put them at double the value. It would therefore be very enlightening if some of the gentlemen from Somerset House would state how they arrived at the annual value of licensed premises.

There had been some little confusion with regard to the method of arriving at the compensation value under the 1904 Act and at the value under the 1910 Act. Under the 1904 Act all circumstances were taken into consideration, *e.g.*, the trade that the retailer was doing. It had to be borne in mind that one man might be doing a far larger business in a particular house than either his predecessor or perhaps his successor would do. The personal element entered into the trade done. Without giving names he was sure they knew that there were certain firms who ran several licensed premises, and who, owing to their name, were doing a far larger business than was done by their predecessors. He would mention, as examples, Short's and Mooney's. Only last week at Quarter Sessions it was given in evidence, and therefore was public property, and he was not betraying

any secrets, that the profit derived from a particular house was £1,000 a year more, owing to the name of H. H. Finch, than it was under his predecessor or would be under his successor, because of the personality of the licence-holder. How could that affect the "annual licence value" for rating purposes? In his opinion it could not, because it was personal to the individual, and that particular individual would take the trade with him to any house in which he might carry on the business of a licensed victualler.

It was therefore most unfair to base the "annual licence value" on a trade that a particular individual might do, because it was not the "annual licence value" of the premises; and Section 44 (2) of the Finance Act of 1910 said: "For the purpose of this provision the annual licence value shall be taken to be the amount by which the annual value of the premises as licensed premises exceeds the annual value which the premises would bear if they were not licensed premises."

It was a most difficult thing of course, as had been said by the previous speakers, to arrive at the actual annual value because it largely depended in whose hands the business might be carried on. In that respect he differed from Mr. Cuthbert Lake, who said that these valuations were simple. He could not at all agree with that. They were most difficult, because there were such a variety of circumstances which had to be taken into consideration in each house that was dealt with. If it were as Mr. Lake said, he (the speaker) thought their occupation would be practically gone. They might bring a boy from school and set him at a desk and say: "There are so many barrels at so much a barrel at so many years' purchase, just make that calculation."

That was not the way to do it. Each house depended upon into whose hands the business might be put. With those few observations he would conclude, and would be much obliged if their friends from the Strand would come forward and enlighten the Meeting.

Mr. DRYLAND HASLAM, Jnr. (Fellow) said he had not intended to say anything on the matter, but he thoroughly agreed with the author that the "annual licence value" might, and most likely would, be made use of in the future in cases of compensation, and if they were going to reduce the first figure and increase the figure to be deducted so as to make the "annual licence value" as small as possible, they were running a serious risk later on when the question of the amount of compensation to be paid for the loss of the licence came to be considered. He was aware that under the Finance (1909-10) Act, 1910, all owners were between the devil and the deep sea, and whatever they did they were sure to be "had" somehow. He had had an illustration only that morning. A maiden lady had visited his office in a state of considerable agitation, and informed him that she had filled in Form IV., and in order to avoid Increment Duty had stated therein that she was not prepared to take less than £4,500 for 12 acres of land. The Commissioners had taken her at her word and had charged her undeveloped land duty (which she had not thought of) on that amount, and she wanted to know how she could get away from her return. So, too, if they reduced the annual value to escape annual duties they were running considerable risk when later on they came to claim compensation for the loss of the licence.

Mr. SYDNEY O. NEVILLE (Visitor) said, as one who was more or less responsible for the control of a large

amount of licensed property, he felt that under the Finance Act they would find it very difficult to correlate in any way between the compensation value which was at present paid for a licence and "annual licence value." It seemed to him that the compensation value was the capital value of the premises as between a willing purchaser and a willing seller; but the annual value was the value of those premises from year to year. The annual value of a butcher's shop and the annual value of a public-house, presuming them both to bring in £500 a year to the occupier, must be exactly the same for that one year, but if one tried to capitalise it as between a willing purchaser and a willing seller, one would find that the public-house would command a much higher price than the butcher's shop, because if the neighbourhood were to improve in value the public-house would not be subjected to the same competition as the butcher's shop.

The annual value from year to year must surely be in proportion to the profits that might reasonably be expected to accrue from that house during any one year under review, but in fixing the compensation value the intention of the Act was to protect from loss those who had bought that public-house, and to give them the price which the public-house was worth in the open market.

One of the difficulties into which the Finance Act would plunge anybody who tried to value premises according to the Kennedy judgment would be the impossibility to correlate between "Annual licence value" to the tenant and the capital value to an owner. It seemed to him that to value a public-house on a percentage of the takings was both inequitable and against public interest. The annual value of a public-house was the value which a free tenant would pay for it; and that tenant might sit

in his office and say, "Shall I pay high prices and
"sell good articles and sell a large quantity at a small
"profit, or shall I pay low prices and sell a smaller
"quantity at a large profit?" It was quite possible to
imagine that a house might take £1,000 a month and
make less profit than if in the same house inferior goods
were sold and £800 per month taken. In his opinion it
could not be a good valuation in law or in the public
interest to say to the man who bought good liquors,
"We shall assess you higher because you choose to sell
"good liquors, even though your profits are less than if
"you sold bad liquor."

If they were to base the "annual licence value" upon
the profit which were derivable from any particular
house, the whole question would turn upon the debat-
able point as to what was the normal free price for beer
and other liquors. The free open market price of any
article must surely be a price which would return a fair
trading profit to the manufacturer.

Speaking with reference to London alone, and taking
first-class brands of articles, he did not think the prices
at which they were sold at present to tied houses were
above the normal free price which would return a fair
profit to the manufacturer. Twenty-five years ago prac-
tically the whole London trade was free, the relations
between brewer and publican being merely loans which
could be, and in fact were, continually transferred from
brewer to brewer, relations which existed to-day between
manufacturers and retailers in most industries.

In those days of free trade the market prices of
good brands were 33s. and 30s. (less 5 per cent. discount)
for mild ale and porter respectively.

Although at the present time of great pressure some
known firms, to keep their plant going, gave as much as

20 per cent. discount, a price below the average cost of production, those must surely be considered abnormal and temporary terms.

When it was considered that in Scotland, where the trade was mostly free, prices were above the tied prices of London; that even at this time of pressure some firms producing more than one-quarter of London's consumption preferred to allow a portion of their plant to remain idle rather than accept orders at more than 5 per cent. discount; and that further beer duties amounting to 2s. per barrel had been imposed; it did not seem that the old free prices of 33s. and 30s. (less 5 per cent.) could be deemed inflated or to intercept the retail profit of tied houses.

The CHAIRMAN, in putting the vote of thanks to the meeting said that he personally felt much indebted to Mr. Dinwiddy for the careful way in which he had prepared his Paper.

He agreed to a great extent with Mr. Hayward's remarks on the question of fixing the value of a public-house upon the profits made by the tenant. That it seemed to him was taking into consideration the business capabilities of the tenant in fixing the annual value. Some other means should be laid down for fixing that value which obviously should not be made to depend upon the trade done by the individual.

With regard to Mr. Justice Kennedy's judgment which had been mentioned, although in any case he would be the first to adopt a judgment given by a judge, he had always thought that the capitalisation of the trade in that case was far too high. He was aware that some of his friends who were present thought that his views on the capitalisation of a licensed business were too low, but he could not understand how ten and eleven years'

purchase could be given for a trade of that class with all its risks. He thought the basis of the capitalisation of the public-house trade had been, and was still, far too high.

He would put to the Meeting the vote of thanks which had been proposed by Mr. Wallis and seconded by Mr. Cuthbert Lake, and he was sure that they would pass it with acclamation.

The vote of thanks having been put to the Meeting and carried unanimously,

Mr. DINWIDDY, in reply, said he was extremely gratified by the Meeting's kind reception of his Paper, and he felt that the labour which he had expended upon it was more than amply repaid by their appreciation.

One or two things occurred to him—first of all, upon the valuation on the “Kennedy” basis. He used that word for short, but really it was a misnomer, because Lord Justice Kennedy laid it down that if there were a “free” rent that “free” rent was to be capitalised, but if there were no free rent, but a brewer was interested in the property and it was let at a “tied” rent, then the only alternative was to capitalise the brewer's profit, but he preferred the other.

Therefore, they had two bases; if, on the one hand the house were “free” they capitalised the “free” rent; on the other hand, if the house were “tied” they capitalised the brewer's profits. He (the speaker) suggested that those two methods of valuation would result in rental values and capital values differing as wide as the poles. He quite endorsed the President's remarks that the Kennedy judgment was too high.

Mr. Fox had asked the question: What basis was there for a tied rent? He (the speaker) did not know any basis, and he did not believe that there was such a

thing as a basis for tied rent. The only thing one could say was that the tied rent ought to be the ordinary premises value, but his experience was that where one house was let at a tied rent of, say, 20s. a year, the brewer allowed no discounts and got top prices, whereas in another house the rent might be £50 or £100, but the brewer obtained only "free" prices for his beer. It was really a question of a shuffle, whether the rent were put on the beer or whether it were put on the premises. There was no such thing as a standardised tied rent.

He would like to say a word on the President's remark as to assessing public-houses upon the trade done. One did hear time and again, especially in assessments, how iniquitous it was—that the butchers and bakers were not rated upon their trade, and yet the poor publican was. That was all very well, but how in the world were they to escape it? In London he did not suppose there were more than 5 per cent. of the ordinary public-houses let at "free" rents. The only basis for assessment purposes, and the basis one had to get at was the estimated free rent of a public-house. In London one never found a free rent, or very rarely, and if there were nothing to help one, all that could be done was to find what was the capacity for trade of the house. Although it was against the judgment of Quarter Sessions only last week, yet it did appear to him that the personal element should be allowed for. But the old judgments were based on the capacity for trade of the house, and that was to be the basis of the assessments. If they could have a free rent, or any basis of a free rent, so much the better, but when they could not find it they were driven to the trade basis of assessment.

The Meeting then closed.

AT
THE ORDINARY GENERAL MEETING,
Held on Monday, 24th April, 1911.

LESLIE ROBERT VIGERS (President) in the Chair.

The adjourned discussion on Mr. W. R. Baldwin-Wiseman's Paper on "The Conservation of our National Water Resources" and on Mr. W. Vaux Graham's and Mr. H. F. Bidder's Paper on "Judicial and Parliamentary Decisions with regard to Rights in Underground Water since 1907" was resumed.

Before calling upon Professor Henry Robinson to reopen the discussion the President asked the Secretary to read communications which had been received from Mr. Joseph Lucas (Professional Associate) and Mr. Percy Griffith (Visitor).

Mr. JOSEPH LUCAS (Professional Associate): The *motif* of the admirable Paper by Messrs. H. F. Bidder and W. Vaux Graham appears to be a desire to contribute reasons for the creation on equitable grounds of some right in underground water other than that flowing in a defined and known channel. Had there been real property in underground water, the water-bearing strata would long ago have been accurately surveyed and mapped in the interest of landowners generally; and many of the doubts and difficulties that have sprung from the

general ignorance of the subject as to the area contributory to particular sites at issue, the direction of flow of the subterranean water as related to those sites, with the real or imaginary claims to compensation resulting therefrom, would have been set at rest and decided on scientific evidence.

It is difficult to see that "some rights" can be created without involving the whole responsibility of ownership. For instance, a coal mine does not want the water which invades it from neighbouring lands, nor did the Severn Tunnel want to draw the Monmouthshire springs. In both cases the cost of pumping to waste is enormous and the water unfit for a public supply. Had there been ownership in the water, would it not have been a somewhat burdensome honour to be the neighbouring landowner? The hardship of losing his springs and tenants might conceivably have been enhanced by having to pay the cost of pumping.

On the other hand, from the want of ownership, cases of greater hardship than are ever likely to occur again are illustrated by the 140 or so overflowing artesian wells in the Wandle Valley, which one fine morning in October, 1884, were absorbed by the Streatham Well, and some 500 houses were left without any water supply. Permanent pumping set in in 1894, and, say, £20,000 capital was destroyed.

If this had happened now, the onus of proof would have been cheerfully borne by the owners, as the proofs are complete and beyond dispute; but in the vast majority of cases where real diminution or total deprivation takes place, it is impossible for the injured owners to prove it to be the consequence of the operations at a recently erected pumping station for want of the necessary evidence, viz., a long continued daily register of

the height of the water in the well, and the quantity drawn daily previous to the pumping. To say "It is "only since the pumping began that my well has run "dry," possesses as much value as the similar argument relating to Tenterden Steeple!

The blandishments held out by the authors to prospective losers of water read, with great respect, for many other reasons than those given on page 386 of the Paper, very like moonshine. In the absence of the necessary data, how is the person on whom the onus falls to prove his case? He cannot. Therefore, I think the onus should always fall on the undertakers to prove that the loss is not in consequence of their pumping.

With this subject is connected the "distance limit," which should generally be abolished, and the limit of the subterranean basin substituted, or of the surface basin when the case requires. There is always a definite subterranean area, which can be ascertained for every subterranean basin with tape-line and level.

I am glad to see that the abuse of roving powers, formerly so much practised, has met with a check. A generation ago the specified works were sometimes a part only, while the roving clauses covered the real objective. I think it would be a great stretch of meaning to make the words "ancillary thereto" cover new wells, as suggested in the Paper. I appreciate the difficulty of specifying works before the quantity of water available has been ascertained, but in the altered Lord Chairman's Clause I feel a difficulty about the meaning of the word "authorised" if it is not to include "specified" by implication, for how can works be authorised unless they have been specified? It can hardly be intended that the authorisation should be perfectly vague. I do not think that protection or the right to

compensation for a mere prospect of serious injury would go far. It would lead to the question of proofs.

A quantity limit involves an accurate knowledge of the area contributory and the minimum annual rate of percolation to be expected. It then becomes an useful safeguard.

Now I come to the striking point in the Paper, viz., the power conferred on local authorities by Section 51 of the Public Health Act, 1875, which is a roving power unchecked by any shadow of inquiry or supervision, and subject only to limitations of district. They are unfettered in other ways. I never heard of a water company calling in the services of a water diviner. They are spending their own money, and might do so but for the instinct of self-preservation, but in the case of local authorities the practice of so employing the ratepayers' money is becoming much too common, and often with disastrous results. Unfortunately the question of the legality of the use of the divining rod has not been decided in a court of law. The Local Government Board has no option in the matter. Though sundry auditors have disallowed such payments, the Board has *nolens volens* been compelled to reverse the disallowances. In one case not subject to audit by the Local Government Board the loss was £16,000. No water was found. If the practice is not illegal it should be made so. As trustees under a *cestui que* trust, local authorities should be restrained from making such use of the ratepayers' money.

A complete hydrogeological survey will have to be undertaken sooner or later, and the allocation of water supplies effected by watershed boards, under a central authority, as suggested by me nearly forty years ago.

Mr. PERCY GRIFFITH (Visitor) wrote: I regret that my remarks occupied so much of the time available for discussion at the last Meeting, and only venture to put forward the few points remaining on my notes in the form of "correspondence."

The authors refer to the question of specifying works in Acts of Parliament as being "not customary," but no doubt Mr. Graham, as an engineer, will admit that it is *impossible* to define the extent, diameter, depth or dimensions of wells, borings or adits at the stage when Bills are deposited in the House. This proposal, as implied in the Lord Chairman's Clause and in the Water Supplies Protection Bill, is therefore impracticable. This was admitted by the recent revision of the Lord Chairman's Clause quoted in the Paper.

The authors refer to the "Model Clauses" as indicating the intention of Parliament to insert similar provisions in all Private Acts "unless special circumstances render them inappropriate." It is important to observe that the Water Supplies Protection Bill would have applied several very drastic provisions to all private Acts quite irrespective of such special circumstances, and that this would have been a serious restriction on the powers of all water authorities. On this ground alone I claim that the Bill was very properly rejected, and that the author's reference to it as a "plucky attempt at constructive advance" is totally unwarranted.

In the paragraph dealing with the power conferred by Private Acts, the authors refer to the Barnet case as showing that this company and probably many others have "the right to sink wells and make works where they please." This statement appears far too drastic, and is indeed an exaggeration of the facts, which might be

modified with advantage. A similar observation might be made on the statement that the powers of large water authorities "to inflict injury by the abstraction of "underground water is as great as it is completely "unchecked by any shadow of inquiry or supervision." It seems fair to suggest that by statements such as these the authors have revealed a bias in favour of private owners of wells as against water authorities, and the writer feels bound to claim more impartial treatment for bodies which are using their statutory powers in the discharge of onerous statutory obligations.

In their reference to Coal Mines the authors conspicuously omit any mention of the depletion of public waterworks which is known to occur in many districts, in some cases temporarily during the sinking of new shafts, but in other cases permanently, owing to the fact that it is more economical to keep workings dry by pumping than to insert "tubbing" in the shafts. Surely water authorities and their contributories (*i.e.*, the public) are as much entitled to protection as the owners of private wells, if indeed they are not more so.

Professor HENRY ROBINSON (Fellow), in reopening the discussion, said in other countries the water supply of the community was looked upon as a national question requiring most careful consideration, but in this country the question of water supply had been neglected in a manner which could only be characterised as shameful. For instance, in 1881, thirty years ago, Bills were introduced into both Houses of Parliament to make provision for the better prevention of floods and for the conservancy of rivers, and a great effort was made to pass them; both, however, failed. In the two following years similar Bills were introduced but were abandoned.

At that time the country was alive to the necessity of something being done to prevent water supplies being appropriated under Acts of Parliament without due consideration to the requirements of the country, and he remembered perfectly well that efforts were made to place the water supplies of the country under a Government Department of State. The matter was, however, dropped in 1883.

A few years later, in an address which he gave at Southampton (copies of which were in The Institution Library), he called attention to the storing of flood water and its many advantages, such as the preservation of the country from the injury due to floods at certain seasons of the year, and as a remedy for the no less serious injury due to drought at other seasons. That Paper was fully discussed, and caused a considerable stir at the time, but to this day no Public Department of State had been formed; and he wished to put on record, and he trusted that everyone would agree with him, that the time had come at last when some Department of State should be formed to deal with the all-important question of water supply.

Under various Acts of Parliament water supplies had been absorbed which were capable of supplying very much larger populations than would be required under their particular Act. It was, however, not too late to put some of these matters right in the future, and such wrong as had been done in the past admittedly would have to be set right. This subject would require careful consideration on the part of that Department of State which would certainly be formed sooner or later. He suggested that it would carry great weight if The Institution as a body were to pass a resolution to the effect that they considered it most desirable that a

Department of State should be formed having control of the national water supply.

In years gone by large storage reservoirs were looked upon with a certain amount of suspicion, owing to river pollution and to the belief that water once polluted was always polluted. They knew now that if the water were stored in a large reservoir, the bacteriological pollution of that water in time practically disappeared. It was called by one of the well-known bacteriological chemists the devouring theory, that is to say, the injurious bacilli were few compared to the harmless bacilli, and the latter devoured the food which the injurious bacilli required.

The late Dr. Frankland, a great authority on those matters, once thought that with the storage of foul water the water remained foul, but a few years before his death he read a Paper at the Royal Institution in which he said he was surprised to find from observation he had made what a change was effected in the condition of polluted water after being in a large reservoir for some weeks, and therefore his old prejudice against storing impure water disappeared. He (Professor Robinson) mentioned that, as many persons still held the old belief and it was necessary if possible to expose its fallacy, because a large number of impounding reservoirs were required throughout the country for the storage of flood water to give compensation water to the streams for the benefit of the riparian owners in times of drought.

He passed from that subject to the question of underground water. He would be brief, as he did not wish to enter into controversial matters, but he would add one point which was within his own practical experience.

Everyone nowadays who put down a shaft or sunk

a well knew that the amount of water which would come to the pumps depended upon the geological formation of the district. If it was a pervious formation the water would come from a very considerable distance along what they might look upon as an inverted cone, the area of the base of which would of course be very much greater with a pervious formation than with an impervious one.

There was one case he wanted to put on record, which was referred to some years ago, a case where a town had Parliamentary powers to take water from a stream, giving compensation to the millowners. Instead of taking water from the stream, they preferred to put a well down in very pervious sandy ground adjoining the stream, and to pump the water, which they started to do. He was asked to advise about it.

A few months before he had happened to be talking about identifying underground water, and he was told by a very distinguished analyst that lithia was identifiable under the spectroscope. In the spectroscope, as practically they all knew, the sun's rays had a very powerful sort of belt which was peculiar to lithia, lithia being the only material which would give that effect under the spectroscope. That conversation occurred just about the time he was asked to give an opinion whether it was right for the town authority to take water from the underground source rather than the stream, to defraud, so to speak, the millowners of the water. He went down to the district, stayed there some days, and made arrangements with his analytical friend in London. He studied the matter, made calculations as to how the water would flow from a particular point to where the well was, and he put lithia in that stream, taking samples at various points and sending them up day and

night to London. At length a telegram came saying that there were traces of lithia, and then day by day came the same report, and lithia was established beyond any question at all. That case came before the Court, and he made an affidavit and put in his evidence. There was some technicality to be gone through before the case again came before the Court and the matter was adjourned, but before the adjournment the judge said he had read his (the speaker's) affidavit and particulars, and he hoped to be there to try the case when it came on and to set aside (he remembered the words very well) once and for all the inequitable decision of *Chasemore v. Richards*. The matter went to arbitration as a preliminary, and he need scarcely say that when it was known that he had made that discovery the millowners were approached and the case was settled out of Court.

In all questions of underground water some knowledge of geology was essential, and as an instance he would mention another case where shafts were to be sunk for the use of a factory close to a large manufacturer's, and the promoters were told that if the shafts were sunk the old factory would have to stop work because the water supply would be destroyed. He was asked to give an opinion, but he said he was unable to do so without studying the geology, but he referred them to the first case he had mentioned, and the result was they came to a friendly arrangement and the new factory was not built. It so happened, quite by chance, that when in the neighbourhood some months afterwards he was asked by the manufacturer to visit his place; he did so, and the owner showed him the geological maps of the neighbourhood. He did not mention it to the factory owner, but he told his solicitor that he (the factory owner) had been very lucky, because the geological

formation proved that the water was flowing in the opposite direction, and the manufacturer might have gone on with his work and the two factories could have worked together, the only objection being that one would have competed with the other. That, he thought, proved how necessary a little geological knowledge was in underground water cases.

In conclusion, if it was thought desirable he suggested they should put on record that in the opinion of The Institution a State Department should be created having control over the national sources of water supply. He put it to them in all earnestness, because compared with America and Germany the subject in this country was openly neglected. It was a national question, and in spite of efforts made twenty and thirty years ago they had let matters drift, and allowed things to go on in the most careless manner. Nothing could be more important than the preservation of the present and future water supply of the kingdom. He hoped that he was not guilty of any impropriety in suggesting that they should come to some resolution to that effect, but it was for the President and the Council of The Institution to consider if he was in order in making that suggestion.

Mr. S. H. COWPER COLES (Member of Council) said that he would like to add a few words to the discussion on Mr. Graham's and Mr. Bidder's Paper from another standpoint. The authors of the Paper and those who had taken part in the discussion had dealt almost entirely with underground water from a pumping point of view. From his own experience in Wales, where of course they had very valuable water areas that supplied the great mineral towns of South Wales and also the towns of Birmingham, Liverpool, and Birkenhead (the

latter under construction) he would tell them what had been his experience. It might not perhaps have struck all of them that in constructing those large reservoirs, and in conveying the water to the different towns, underground water was largely affected.

There was one case at the present moment which was very clear in his mind, having only visited the spot in the last week or two. There an Urban District Council were building a large reservoir in their own area, which they would not have built, he thought, if the Government Board which had been suggested had been in existence—they would never have been allowed to confine the reservoir within their own area. The consequence was that the water fall in that area was not large enough for what they required, and they therefore obtained Parliamentary sanction, and had driven an adit a mile and a quarter or a mile and a half into the hill on the recommendation of engineers, who gave it as their opinion that enough water to fill up their reservoir would be struck between two strata. Well, they built that adit, but unfortunately they did not strike the water, and it was now suggested that the difficulty might be got over by driving the adit another half mile, and going through the hill into an entirely different watershed, picking up water from another stream altogether and bringing it back through the mountain. This, of course, would mean large compensation in the new area that they were going to tap, and would entirely upset the Board of Conservators and others in that area. No doubt people would say that it was all a matter that could be settled by Parliament, but then to the west on the same mountain there was another Urban District Council also with their reservoirs. Naturally they were very anxious as to how driving

adits in a somewhat wild way through mountains was likely to affect the water in their reservoirs.

Then again, as they climbed up the side of a certain mountain they might see a fine stream running at a great width and with great force, but if they followed the stream to where it joined the main river they would be surprised to find that half way down it went to about half the original size, then enlarging again. It was probable that when they laid their pipe or adit from the reservoir which was about to be constructed on that mountain, they would strike where this great leakage in underground water was going from the stream into the different strata.

Reference has also been made during the discussion to railway cuttings and railway tunnels and how they had affected underground waters. Of course in recent cases they had had the protection of Parliament for the areas affected, but it was not only in driving cuttings and adits that damage occurred but also when the water was conveyed from reservoirs to large towns at considerable distances, and, as in the Birmingham case, going through agricultural areas with their large mains; the effect was that in some of the scattered villages the water supplies were entirely dried up: that was a great hardship upon the particular agricultural areas affected.

Then again with the same pipes, where water was being conveyed on the side of the hills, the land above was frequently waterlogged, and the land below deprived of certain water rights which they had previously enjoyed. Those facts all pointed to the necessity for some further Act of Parliament, and although he agreed with a great deal that had been said about Lord Desborough's Bill, the Water Supply Protection Bill of 1910, he thought

the question was much bigger than that, and wanted a great deal more study before they came to any conclusions, because, as he had tried to show, it was not merely a question affecting the area where pumping was in progress, for those immense water schemes largely affected the country through which they went. So that it was very necessary to be quite sure what they wanted before they asked for legislation which might go further than they thought and tie up the water rights.

It was quite clear that in districts like those to which he was referring, where they had as many as eight or ten large reservoirs in the county, the county councils had been able to protect themselves and now got special clauses, which had almost become standing clauses, inserted in the Bills for supplying water en route from those reservoirs in cases where they affected the water supplies.

The question of conserving water was no doubt a most important one, and one which they had made efforts in South Wales to try and carry out. The Glamorganshire County Council, in order to conserve the water for their county, applied to Parliament for powers to survey, and Monmouthshire did the same thing, but nothing had come of it and it all pointed to the fact that instead of county councils or one county trying to get an area merely to supply that particular county, some authority should be set up, at any rate in the great mineral areas, capable of controlling all the counties affected by those watersheds; and it really went further than that, because the very area that he had been speaking of had twice been surveyed by the London County Council for water.

In South Wales they looked upon that scheme as dead, and he supposed it was, but at the same time there

was great hardship in that case because the area was twice surveyed, twice the Bill went before Parliament and came to the stage when petitions had to be lodged, with the result that owners were twice put to the expense of petitioning against a Bill that never proceeded. It also had the bad effect of unnecessarily raising the value of watersheds when they were surveyed first by London, then by Glamorganshire, and then Monmouthshire, and then for certain reasons dropped. For years past when their auctioneers were putting their best figure upon the value of any farm, they had always pointed out what a valuable acquisition it was as a watershed, or if not as a watershed what a valuable acquisition it was for an asylum; those seemed to be the two competing things.

He would gladly support the resolution suggested by Professor Robinson that evening, and would be prepared to second it if from the meeting that night a broad resolution should go forth that the time had come when something further was required either in the way of a State Department or a Joint Committee of their Institution and other Institutes of a kindred nature to consider the matter and assist Parliament in formulating some better law than they had at the present time in connection with underground water rights.

Mr. WALTER SEDGWICK (Visitor) said that as a visitor he would like in the first place to express his thanks to the Chairman and to The Institution for the privilege they had accorded him in allowing him to be present that night and take part in the discussion. He had not had the advantage of reading Mr. Baldwin-Wiseman's Paper, so he proposed to confine his observations solely to that of Mr. Vaux Graham and Mr. Bidder, and for that reason he did not propose to go into the very

interesting questions which had been dealt with by Mr. Cowper Coles in relation to the impounding reservoirs in South Wales; but he would like to make one observation which he thought supported the suggestion which had been made that there should now be some State Department to govern the whole question of water supplies. The observation was that in the present Session of Parliament there were two different authorities seeking powers to construct a large impounding reservoir on exactly the same site, and possibly if there were some central board of control in existence the difficulties which would have to be faced by the Parliamentary Committee this year would be avoided.

To return to Mr. Vaux Graham and Mr. Bidder's Paper, he would like to express his very high appreciation of its great merit, and to say how useful it was to those who like himself were largely concerned in the fights before Parliamentary Committees to have in so clear and concise a form so much valuable information upon the many difficult questions which were connected with underground water. If, however, he were to go into the merits of the Paper at great length he would occupy too much of the valuable time of the Meeting; he therefore proposed at once to turn to one or two criticisms which he desired to make upon the Paper.

His first criticism was on a statement which occurred early in the Paper (page 360, Vol. XLIII. of the *Transactions*), where the authors said, previous to the decision in the case of the *Attorney-General v. The Frimley and Farnborough District Water Company*: "It appears to have been generally assumed by water companies and other bodies that on such land (*i.e.*, on land purchased by agreement) they were entitled to sink wells and erect pumping stations—as any other land-

“owner might.” If that was the assumption of the authors of this Paper, he could only say that they had been trained in a very different school to himself, because he could remember most distinctly when he first came to an office in Westminster that he was taught that he had no right to make such an assumption, and that if it was sought to give water companies roving powers of sinking wells it was necessary to do so by special words inserted in their special Act of Parliament, and words had been inserted in several special Acts of Parliament for that very purpose, and especially so in the Barnet Act, which ultimately became a question of litigation in the Courts.

The draftsmen of those Acts had great difficulty in framing suitable words because of certain reasons arising on the Standing Orders of Parliament. It was dangerous to say specifically that on any lands acquired by agreement the Company might erect a pumping station, and they had to find words which would give that power in a somewhat indefinite form, but he thought they had succeeded in their attempt because the House of Lords as a court of law had held that in the Barnet Act the Barnet Company had been given those powers. Unfortunately for water companies that practice had now been found out, and he did not think it would any longer be possible for water companies to obtain those very wide powers.

He also disagreed with a statement in the authors' Paper where they said that the distinction between the Barnet case and the Frimley case seemed very fine, because in the Barnet Act there were those special words specially inserted to give them roving powers. Before he passed from the Barnet case he would like to refer to another statement in the authors' Paper where they

said that "in the opinion of the authors it cannot be "supposed that Parliament, in passing the special Act"—that is, the Barnet Act—"foresaw such a far-reaching "inferential consequence, and inquired into its result." He was bound to say that the authors had his sympathy when they suggested that Parliament was not quite so omniscient as theoretically it ought to be, but in the Barnet case the promoters certainly knew what they were trying to get, and the principal opponent, the Hertfordshire County Council, also knew, and it was perfectly clear in the last day's proceedings in the fight before the Committee that the County Council assented to the section in the Barnet Act, fully understanding that it was to give them a power of sinking wells on land to be afterwards acquired by agreement.

Mr. BIDDER asked whether it was assented to in argument.

Mr. SEDGWICK replied that it was assented to in argument in a statement by Lord Robert Cecil, K.C.

Passing from the decisions of the Law Courts to the Parliamentary Committee Rooms, he would like to say a few words upon the clause which it was now the somewhat common custom to insert in private Acts giving special protection to owners of private wells. On those clauses the fights in Committee Rooms had practically been confined to two points: firstly, upon whom the onus of proof of injury should fall, and secondly, what should be the radius of the protected zone. With regard to the first point, with one single exception every clause of general form giving protection to all wells within a given zone and not confined to special wells of special landowners—with one ex-

ception all the general clauses had put the onus of proof upon the landowner, the only exception being the South Staffordshire case, where the Company agreed to take the burden of proof upon themselves. With regard to the second point, the radius of the zone, it was now usual to insert in the clause a distance of two miles. In the Frimley case in 1909 two miles were conceded by the Parliamentary Committee, although the landowners asked for somewhat more; in South Staffordshire it was true that two and a half miles were conceded, but in the two Acts of last Session, East Grinstead and Cambridge, two miles were agreed to by both the promoters and the landowners.

He would now pass by the Frimley and East Grinstead Acts, in which he had the advantage of being on the same side as Mr. Vaux Graham, to the Cambridge Act, because there was a statement in the Paper on that Act which he thought might be somewhat misleading. The authors said with regard to the Cambridge Act that "the onus of proof varied." In that Act provisions were inserted for the protection of private wells in three different forms. There were, in the first place, certain agreements scheduled in the Act for special landowners, whose lands were required for the construction of a new pumping station. And as part of a general settlement including the acquisition of their lands, it was agreed with regard to certain wells very close to the site of the proposed pumping station that when, during the operations of the water company, the level of the water in the wells sank to less than three feet above the bottom of the well, it should be assumed that that diminution was due to the company's operations, and they should immediately take steps to remedy it; but so far were the Cambridge Water Company departing from the

general attitude taken up by water companies, that the onus of proof should be put upon the landowner, that in the same Act there was a clause for the protection of the same landowners with reference to wells belonging to certain cottages and houses of theirs in two villages rather more remote, in which clause the usual form was adopted and the onus of proof was put upon the owner of the well. In that clause the radius of the protected zone was two miles, and it was provided that there should be no compensation unless the well was an effective source of supply.

The third form of protection in the Cambridge Act was given by a clause agreed with the county council. In that clause instead of providing that the company should make good the supply to each individual well, it was enacted that they should erect stand-posts in the village, one stand-post for every ten wells affected, and supply 1,000 gallons of water free for every ten wells affected, and that seemed a useful course to adopt, certainly as regards the water company, and possibly as regards the cottagers, in cases where there were numerous private wells in one village.

There were many other interesting points arising on the Cambridge Bill with reference to underground water. One was referred to in the Paper, the limitation upon the amount which might be pumped from the lower greensand. Another upon which most interesting evidence was given was the proposal to sterilise water derived from the chalk either by chlorinizing or ozonising it. Experiments had been carried out showing that the water could be most successfully sterilised by chlorinizing it, but it would be taking up too much time if he went further into that, and he would just say a few words upon what he thought was a fair form which this

clause for the protection of wells might take. It was not pointed out in the Paper that the clause provided for three remedies to the owner of the well: (i.) either a supply of water should be laid on by the company to make good the loss of water from the well, or (ii.) the company might deepen the well or make fresh adits or borings so as to make good the supply actually in the well, or (iii.) they might pay monetary compensation. He thought it right that those three alternative remedies should be contained in the clause, which should also be limited in its operation to wells which were effective sources of supply. The difficult points were the onus of proof and the radius of the protected zone. Now, he entirely agreed with what had been said at the last Meeting, that it was most difficult to prove a negative, and therefore, as a general rule, the onus of proof should be put upon the owners of the wells. But if that were so he did not see any justification for the zone limit. If protection for underground water was to be admitted in principle, then anyone who could prove that his well was affected should be entitled to compensation, and a person ten miles away who could prove injury was equally entitled to compensation with one who proved injury only two miles away. It might be very hard upon landowners, and no doubt it was, to be always obliged to prove the injury. It would be fair, therefore, that within a very restricted zone, say, perhaps half a mile, the presumption of injury should be upon the company, and within that limited zone they should be required to prove the negative, and the burden of proof not placed upon the landowner.

He would also suggest that in order to help landowners and to save them from the serious expense of fighting before Parliamentary Committees, efforts should

be made to obtain the insertion of a protective clause in the Model Bill. There was, as practically most of his hearers knew, a recognised Model Bill of clauses prepared by the Lord Chairman's Counsel which promoters of private Bills were expected to put into their private Bills. A very useful clause for the protection of riparian owners against an impounding scheme had found its way into the Model Bill, which provided that compensation water (usually equal to one-third of the average available rainfall over a period of three dry years) should be given to the river, and there were elaborate provisions with regard to the erection of gauges and the payment of penalties to the riparian owners should the water authorities be in default. He felt certain that the insertion of that clause in the Model Bill had saved riparian interests, such as Mr. Cowper Coles represented, from a great deal of expensive opposition before Parliamentary tribunals, and he could not but think that if a clause for the protection of owners of wells also found its way into the Model Bill it would be a great assistance to landowners.

A reference had been made in the Papers and in several speeches to the injury caused by railways constructing tunnels through hillsides, and he remembered very well before a Parliamentary Committee a great fight against a proposal of the Barry Railway Company to construct a tunnel through Mynydd Machen between the Sirhowy and Rhymney Valleys, and the Committee before whom that Bill came inserted stringent provisions for the protection of the water supplies both of landowners on the hillside and the local district council who had a well situate in the neighbourhood of the tunnel.

If he were not trespassing too much on their time

he would like to say a few words about the Lord Chairman's Clause. That clause, as the authors of the Paper had stated, was in a different form this Session to that of last Session, and as a matter of fact it had been changed in each Session since it first appeared in the Model Bill of 1908. He spoke with interest on the form in which the clause appeared this year because it was taken from the Cambridge Act, and he claimed to be one of its parents, as he had settled the form with Mr. Speaker's Counsel during the discussion on the Cambridge Act last Session. No doubt what the Cambridge Water Company intended to get from the clause in its present form was what the authors of the Paper had said; they wanted to have the right of duplicating their pumping machinery or duplicating their wells or adits in connection with the authorised pumping station. As the clause appeared in the Model Bill last Session, it was so stringent that it required every single work for abstracting water to be specified in any Act of Parliament and it was felt that it would be an intolerable injustice to put this upon a water company. They did their best to get exemption from the burden of that clause, and he was glad to say they were successful. He thought they had made it absolutely clear in their Act what their power was, because they put in a very wide clause authorising them to make subsidiary waterworks, not only ancillary to the pumping station, but any works for augmenting or improving their supply of water, and this power might be exercised upon any of the lands within the limits of deviation shown on their deposited plans.

There was apparently a great divergence of opinion as to the merits of Lord Desborough's Bill. The authors described it as "a plucky attempt at constructive advance"; it was described by Mr. Percy Griffith "as a

“feeble attempt to accomplish what was desired,” and he (the speaker) was bound to say that he disagreed with both. He thought it was impossible—to himself it certainly was impossible—to look upon it as “a plucky attempt at constructive advance,” because the Bill was so ambiguous, and so far-reaching in its effect that there did not appear to be any chance of that Bill ever becoming an Act of Parliament, and therefore he could not look upon it as even an attempt at constructive advance. He did not however agree with Mr. Percy Griffith when he said that it was a feeble attempt to accomplish what was desired; if what was desired had been to obtain legislation last Session he would have agreed with Mr. Percy Griffith, but he did not believe that the authors of that Bill ever hoped that it would pass Parliament last Session or become an Act of Parliament. He had often discussed its provisions with one of the members of the House of Commons, one of the principal witnesses for the Bill, and one who watched most carefully all private Acts which related to water supplies in the House of Commons, and from what he had told him he gathered that all that the authors of the Bill desired was to obtain a very full discussion upon the various questions surrounding underground water and the rights of property in underground water. If that was all they desired, then he thought the authors of Lord Desborough’s Bill had been successful in their attempt, because not only did they get a full discussion last Session but they had also obtained the advantage of getting criticisms upon the Bill from the authors of the Paper and from various people who had spoken at these Meetings.

Mr. R. F. GRANTHAM (Associate) said that he thought there was an immense amount of valuable information

in both the Papers which had been read, and they suggested so many points for discussion that it was very difficult to put a limit on their remarks. He would therefore confine himself to one or two points. In the first place he should like to point out a small correction on page 196 of Mr. Baldwin-Wiseman's Paper, where the author said: "In 1864 the Inclosure Commissioners were entrusted with the control of streams, water-courses, and pools, and were empowered under the Improvement of Lands Act of 1864 to advance loans for land drainage," and so on. Now, neither the Inclosure Commissioners nor the Board of Agriculture, who had taken over that work, were ever entrusted with the control of streams, watercourses, or pools, nor were they empowered to advance loans; if a landowner wanted to charge his estate all that the Inclosure Commissioners or the Board of Agriculture could do was to sanction a charge on the estate, or if a number of landowners wished to form a Drainage District or a Commission of Sewers they could apply to the Board of Agriculture and get a Provisional Order sanctioning it, but neither the Inclosure Commissioners nor the Board of Agriculture had any power over streams or any power to advance money. They could sanction a mortgage of the rates of any Drainage District or any Commission of Sewers, but they had no power otherwise.

The authors of both Papers agreed that there should be some central authority to control, or at any rate to investigate the sources of water supply, and also to prevent pollution of rivers, and the same view had been suggested in the discussion on Mr. Scoble's Paper some time ago, but Mr. Baldwin-Wiseman went rather further than that. He suggested that a central authority should be constituted to replace the multi-

plicity of controlling authorities, and he then suggested a certain uniform system of water boards, and that those boards should be classified as main drainage or district boards having the supervision of main drainage areas containing several river basins, and that those water boards were to control water supply, navigation, fishery, and other interests. Now, while he agreed that there should be some central authority for conserving the sources of water supply and for preventing pollution, he did not agree that their powers should extend to drainage, because he thought it would complicate the question very much and would make it exceedingly difficult to work out. He did not know whether Mr. Baldwin-Wiseman was aware (he expected he was) of the very large drainage districts already in existence, some of them under special Acts of Parliament.

For instance, there was the Somersetshire Drainage Act, having a taxable area of 121,000 acres; the upper Thames Valley Drainage Act, having a taxable area of 55,000 acres. Both of those drainage commissions were divided into district boards; the Somersetshire Drainage Commission having sixteen boards under it and the Thames Valley Commission seven. Those were large areas. Then they came to South Lincolnshire where the drainage system was very complicated indeed, and there were very large areas there. The River Witham Drainage District alone had a taxable area of 127,000 acres, divided into six districts. He thought that to undertake the control or to hand over those large drainage districts to any new body would lead to an enormous amount of trouble, and he doubted whether it was practicable. It certainly was not desirable. The drainage system in Lincolnshire as everyone knew was most complicated: one could not go into any part of Lincolnshire and

touch a drain without the risk of encroaching on some authority's boundary. He would therefore suggest to Mr. Baldwin-Wiseman that he should reconsider his suggestion that the central authority should embrace drainage areas as well as fisheries and navigation, and whether it would not be better confined to water supply and to the prevention of pollution in rivers.

Mr. W. R. BALDWIN-WISEMAN in reply said that as the hour was getting rather late he would deal very briefly with the remarks which had been made by the various speakers at this and the previous Meetings.

Mr. Grantham mentioned a statement on page 196. He (the speaker) was not in error, since he referred to the powers which those authorities possessed under the Settled Lands Acts. As to the drainage districts he was quite aware of the number of big taxable drainage areas in the country, many of them legacies of the old Sewer Commissions systems, and also of the work which they had to do, but he felt that if there were to be a water authority that authority should deal with the whole of the water interests of the country, and if any one of those interests was left out then the authority would have to work in a partisan way for the interests with which it was charged, and so would in a way be antagonistic to the other interest or interests outside its jurisdiction, with which sooner or later they would come in conflict. If those interests were also represented, then the work could be much better co-ordinated.

He was not so anxious for the creation of the central authority as he was for the collection of data, so that they might know exactly where they were. As he had pointed out in his Paper, various people and authorities

had been urging for 50 years past that there should be some authority to look after the water, but the general public—the man in the street—was not interested in the question because he did not really appreciate what it all meant. He turned on his water at the tap, and he got rid of his dirty water down the drain, and that was the end of the water problem so far as he was concerned, except that if he was thoughtful he would recall that the cost of the facilities for obtaining and getting rid of it were steadily increasing.

If only enough carefully collected data were available, then Parliament, the local authorities, and the well-informed general public would know what was wanted, and could draft schemes and legislation for the amendment of existing conditions, but at the present time very little data was available. They should first of all collect the data, and when the hydrographic survey had been at work for several years they would have collected much data, and something concerning local feeling and interests even more valuable than the data, and they would then be able to report on the water resources, requirements, and idiosyncrasies of each drainage area. At present the central authority if constituted would not be able to do that. Without the local element and the connection of local interests with each other and the central authority, it looked as if London would not have that intimate acquaintance with the human interests and hydrographic peculiarities of each drainage area which would be necessary for the success of the scheme, and this link must be afforded by the survey working with voluntary observers and rivers boards in each basin, the latter each having a representative on the main drainage board supervising and co-ordinating the work of the several basins in its charge,

and these again in turn each having a representative on the national board.

At first these boards would assist the survey in collecting data, and later as need arose could take charge of various interests and develop their administrative functions, but till data were available as to interests and resources there was no need to create costly administrative bodies working more or less in the dark.

The interests varied in different basins—in some it was water supply, in others the prevention of pollution. For instance, in Lincolnshire it was mainly drainage; in many places in that county the water supply was not above reproach, and in some cases it was susceptible of improvement; but drainage was there the predominant question, and of course each board would deal with the several interests of their area, having due regard to their relative importance.

If a local scheme of water supply or drainage were proposed, it would be first submitted to the water supply or drainage committee of that particular river board; it would then be threshed out in committee, and be reported as amended or otherwise to the general committee of the board, and, if approved, it would then receive the consideration successively of its main drainage board and of the national board, and so would go forward to Parliament in a smoother way, and with more certainty of success than is the case under the present system of Parliamentary procedure awaiting a private Bill. In the long run, although the scheme might be somewhat costly and tedious, still when one came to reckon the cost and time of promoting a Bill in existing circumstances at Westminster, and the possibility of mutilation which it risked, the gain would be all on the side of the new administrative system. They

must, however, deal with all the water questions as an entity, as any partial or sectional system of administration would almost certainly be unsatisfactory.

With regard to Professor Robinson's resolution, it would be much better to pass a resolution that "The Government be urged to use every endeavour to organise "a hydrographic survey to collect and record data," and also that everyone interested should push forward the collection of the data rather than doing anything else. One of the speakers when he read his Paper mentioned that the Local Government Board was already pushing forward with the work ; true, they were, as mentioned in the Paper, doing something very useful, they were sending out forms to collect data with regard to water supply, but they were only sending them out to the various water authorities. They would not, even in that particular branch, get all that they required, because they would have far from perfect returns, and he knew from his own experience in this particular work the extreme difficulty in collecting uniform and correlative data.

Some authorities took no meter readings of their supply, and with regard to others the data would in no wise be full enough ; but even if they got all this data perfect they would not have particulars of the actual draft on the water resources of the country, because they would have left out the enormous consumption of trades such as brewers, railways, and paper makers. The railways of England and Wales in a year used as much water as would for the same period afford a supply to a population of three or four millions at 25 gallons per head per day.

There was a case quoted by Mr. Clayton Beadle to the Joint Committee on the Water Supplies Protection Bill of 1910, in which he showed that in Kent the trades

of various kinds used about 22,000,000 gallons a day, whilst the authorised water supply authority of the area were only pumping 19,000,000 gallons a day. He supposed Mr. Beadle knew nothing of the case of Liverpool in 1895, as he had not to his (the speaker's) knowledge quoted it. The authorities there took a census of what was used, and they found that on the 313 working days of the year the trades of Liverpool were using more water by several million gallons a day than the amount which came through the corporation mains.

That was a point which he thought was rather biased in Messrs. Graham and Bidder's Paper referring to statutory authorities. A statutory authority came into existence for the supply of water as a public utility, and once established its interests and rights required as much protection as those of any other authority or corporation, but if they were to penalise them to some extent, then that would not be putting them upon a fair footing. The traders using large quantities of water should also be made to render a compulsory return.

Then there was another point to which he objected in Messrs. Graham and Bidder's Paper. The case law which they had collected with regard to underground water in America seemed to point to very clear and definite conclusions on the part of the American authorities, but only as recently as January 21st last the *Engineering Record* of New York reported a rather peculiar state of affairs in the city of Newark in the State of New Jersey. The complication arose in this way. The Hudson County Water Company had made an agreement some years before with the Federal Government to supply the Staten Island Forts with a certain amount of water, and the State of New Jersey thinking they would conserve their water for them-

selves passed an Act, the McCran Anti-diversion Law, which forbade the delivery of water to consumers outside the limits of the State. The company in consequence had to go into the hands of a receiver at once, and the Federal Government had to take the matter up for the sake of the supply to their own forts. And the question was raised whether the restrictive Act was right, seeing that it interfered with inter-state commerce, the sale of water of course being the sale of an article of commerce, and at the same time an offer of a nominal sum was made by the Federal Government for the rights in the underground waters of a certain district in the area; it was thus evident that the underground water question was also somewhat muddled over there.

Mr. Griffith asked him (the speaker) whether he could state a figure as to the cost, per square mile of area measured, of the various colonial and foreign surveys. Three weeks ago, in another Paper, he gave the figures as to the total annual cost of the surveys in Victoria, Transvaal, Canada, and the United States of America, but it was absolutely impossible to say how much per square mile it had cost, and as to the cost of measuring the flow at various points of a stream, it depended so much upon the condition of the stream, the difficulty of getting about from point to point, and also of getting volunteer assistance, that no general figure could be given. If they were going to have a really effective survey they would need in addition to the salaried surveyors a large number of voluntary assistants and a certain amount of paid or subsidised assistants as an intermediary between the two, supplementing the work of the volunteer assistants and of the survey intelligent men willing to take periodic records for a small fee.

As to the radius of the protective area, he did not agree with the spirit of this protective clause limiting the range to two or three miles. Such a clause was by no means fair, since the radius of the cone of depletion depended directly upon the structure and disposition of the strata, the amount by which the pumps were capable of lowering the water level when pumping, and it also depended upon presence or absence of fissures. They might have a cone of depletion which might range over a quarter of a mile or it might range over four or more miles, the mathematics of it was somewhat complex, but it was demonstrable, if experimental work such as the speaker had undertaken was done, to approximate some constants in the equation.

It was mainly a matter of interstitial flow under pressure, and if the water level in a well could be lowered by pumping a difference of head could be produced, and correspondingly there would be an increased flow. With strong pumping plant the head might be reduced very considerably, increasing the flow and widening the range of the cone of depletion. What was needed was continuous data on other wells within the region of the particular delinquent well, and by a study of these, alleged depletion could be proved or disproved. If they had a record over a period of years and the local water company went deeper or pumped stronger, or did something of that sort, then there was almost bound to be a difference in the records of the surrounding wells, and with such evidence proof of depletion would be easy, and there would, of course, be no need to limit the range to one mile, to half a mile, or anything else.

It was very interesting to listen to Professor Robinson recounting his experience with lithia. He thought he

(Professor Robinson) was one of the first to use it in this country, but the use of that method, which was due to Theim, was much earlier than the date at which Professor Robinson had applied it; but the lithia method was now quite out of date, and the electrolytic method of Schlichter was in every way far superior and more precise, and he felt it would be the one method which would be used more and more in the future. A start could be made without great trouble if the Local Government Board were memorialised to apply to the Development Commissioners for a grant under the first clause of the Development Act for the purpose of investigating the existing water resources of the country.

In conclusion he thanked the Members for their kind attention.

Mr. VAUX GRAHAM (Associate) in reply said that at that stage of the evening he thought perhaps it would be better for him to ask Mr. Bidder to reply to the remarks which had been made on their Paper as the discussion had almost entirely taken place on its legal aspect, and then if he had anything to add he could say it afterwards.

Mr. HAROLD F. BIDDER (Associate) said that as the hour was getting late he did not propose to make any very detailed statement in reply to the remarks which had been made. He wished, on behalf of Mr. Vaux Graham and himself, to thank many of the contributors to the discussion for the new lights that they had thrown upon the subject.

Many of the objections that had been brought forward appeared to be aimed at propositions not contained in the Paper. He thought that some of those

who had criticised them most severely on reading the Paper a little more closely would find that they were inventing difficulties to be subsequently disposed of.

Mr. Sedgwick's remarks had been most illuminating. They had not known that in the clauses in question they were discussing that gentleman's interesting progeny, and the history of the genesis of those clauses was very instructive.

He would not go into further detail, as he saw it was now half-past nine o'clock, but they had been several times accused of approaching the question with a great deal of bias. Of course, no man who was worth his salt was without bias, but he could only say that Mr. Graham and himself had approached the subject from different points of view. They had done their very best to see all sides of the question, and the conclusion that they had come to was the result of honest effort to apply a judicial consideration to the matter. As Mr. Graham reminded him, he was himself a water company man, while he (Mr. Bidder) had more to do with the injuries inflicted in certain cases upon landowners; but anyhow, they had done their best upon the facts that were before them to form a judicial conclusion.

There was one other point that he would like to mention. In trying to form an opinion as to what was the right direction of progress, it seemed to him to be a great pity to put forward the idea that water companies were philanthropists. They did a very valuable public work, but they did it as traders. He did not think that any one would suggest that a man who bought shares in a water company purchased them for the purpose of benefiting the district in which the company worked. They dealt in a necessary of life: so did the butcher and the baker; and whereas the latter

had to fight for their existence, the water company had an assured *clientèle* and no competition. He thought that they deserved protection, as every one deserved protection, fair treatment, and justice, but to take up the line that water companies were philanthropists before whom all other interests must go down seemed to him to be a most misleading thing and to be introducing a very vicious line of thought.

The PRESIDENT said it only remained for him to close the discussion on the two very interesting Papers to which they had listened. They had had a great deal of information placed before them, and the Papers being always available for reference in their *Transactions* would give them great assistance in carrying out any question that came before them with regard to water.

The Council of The Surveyors' Institution would give every consideration to the suggestion made by Professor Robinson, and if they felt that it would be to the advantage of the general public that they should make such representation as they might feel justified in doing to the authorities on the subject, they would do so, but he did not propose to put any resolution to the Meeting until the matter had received full consideration by the Council of The Institution.

They had already passed a hearty vote of thanks to the authors of the Papers, and he could only personally thank Mr. Graham, Mr. Bidder, and Mr. Baldwin-Wiseman for the time they had devoted to the preparation of the original Papers, and the remarks which they had made in reply to the criticisms.

The Meeting then closed.

THE DEVELOPMENT OF BUILDING LAND.

BY JOHN JAMES DONE (FELLOW).

Read at the Ordinary General Meeting of THE SURVEYORS' INSTITUTION held on Monday, 8th May, 1911.

LESLIE ROBERT VIGERS (President) in the Chair.

The question of the development of building land is one that at the present time occupies a considerable share of public attention. The Finance (1909-10) Act, 1910, and the Housing and Town Planning Act, are the Parliamentary expressions of that public interest.

So far the development of our large towns has been almost entirely the work of individual enterprise, and if the results leave much to be desired, it is a matter of some doubt whether improved methods in one direction will not be dearly purchased by material disadvantages in other directions.

It is not proposed in this Paper to deal with the larger question of town planning, which has already been adequately dealt with in this room. There are, however, a number of points in connection with the practical management of building estates which are of interest to Members of this Institution.

It rarely happens that a surveyor has an opportunity of laying out a new town. It may happen in the case of a seaside resort such as Eastbourne or a "garden city" such as Letchworth.

In such cases the designer has a free hand, and it is

possible to produce conditions which are more or less based on the ideal; but the vast majority of towns are much more the products of economical necessities than of aspirations after the ideal. Moreover, a doubt may be permitted as to whether the ideal town is always and necessarily so much superior to the town that has developed on what may be called spontaneous lines. This was impressed on me after spending a week in the deadly monotony of Philadelphia with its broad streets and blocks of buildings laid out in quarter-mile squares, almost like a chess-board, and then proceeding to Providence, Rhode Island, in which the irregular and winding streets had a charm that was certainly lacking in Philadelphia.

When the question is on the largest scale, *i.e.*, when an entirely new town is being planned, many points have to be dealt with that do not arise when a smaller block of suburban land is concerned. Open spaces, parks, and pleasure grounds may be allocated, sites for schools and public buildings, and for the sanitary requirements of the intended town may be satisfactorily arranged, and other matters may be dealt with that in the case of suburbs, when the land is held by numerous owners, can only be carried out by a public authority. Sites for public worship have also to be considered, but these are not always easy of arrangement. They are undoubtedly a necessity, but many people who use them do not always care to live too near them. Many years ago a deputation from a certain religious community came to me to ask for a site for a chapel, and laid great stress on the advantages of having one on the estate as being an attraction to their co-religionists. Some time after, having a house to let on the estate, and knowing that a member of that

deputation was looking for such a house, I sent him particulars. It actually adjoined the chapel; and he replied with charming naïveté that the house would not suit him because it was "too near." I believe that the erection of the chapel has attracted members of that community to the neighbourhood, but they have all been careful to live off the estate where it was built.

The question of provision of such sites can only be dealt with satisfactorily by each body buying what it requires. Voltaire, after his visit to England, described it as a country of a hundred religions and one sauce, and if anyone tried the experiment of free sites for religious bodies he would be able to rely on each of the hundred promptly appearing; an interesting object lesson in the divagations of theological opinion in England.

A point that has to be carefully guarded against is the conversion of a site originally granted for public worship to secular purposes, and I am inclined to think the only real safeguard is to refuse to sell the freehold, but to grant a long lease, such as 999 years.

At the same time these bodies perform an important and valuable public service, and the real question is how far they can reasonably be assisted. In this respect there is a wide difference between the leading denominations with their admirable organisations and small bodies that may dissolve in the course of a generation.

As to the class of house which may be erected, a sole owner has, of course, much more control than one who owns a field or even a farm in the suburbs; but owners are all alike in this, that they are more or less dependent on the demand. It is useless building houses of a better class than is required. It only means two, three or four families in a house. One often hears complaints that a better class of house is not built but if people don't

want them and won't pay for them, there is no object in building them.

Whatever be the nature of the estate, large, medium, or small, the first desideratum is an accurate map, on a scale of not less than 44 feet to the inch. This class of surveying is practically the only really high-class land surveying that is left to the ordinary practitioner. To be of any use it must be as accurate as surveying is capable of; but when every care has been taken one is sadly conscious of the limits of surveyors, surveying instruments, paper, and subsequent plotting; when measurements are in inches.

For this reason it is a wise precaution to make a note on the plan attached to a building agreement comprising a numbers of plots that "all measurements are approximate."

Speaking broadly, therefore it may be said that the question of building development is that of the management of suburban land; both that which is ripe for building and that which has a prospective building value. There are three stages, each of which has its own problems:—

1. The management and nursing of land growing into building land.
2. The stage of actual development and building.
3. The management of a building estate which has been covered with houses.

It is not proposed in this present Paper to touch the last phase of the question at all, as its problems are sufficiently numerous in themselves to demand an evening's discussion.

The management and nursing of land growing into building land is comparatively simple, though all-important. Such land is generally worth more than

merely agricultural land. Proximity to a town usually, but by no means always, adds to the agricultural value ; but when it is on the immediate edge of the building fringe it is liable to trespass over every part, and frequently becomes next to valueless for that reason ; so that as it grows more and more valuable as building land it becomes less and less valuable as agricultural or accommodation land, and when building development begins on an estate it frequently happens that land previously let at £3, £4, or £5 per acre has to be let for a merely nominal rent of £1 an acre, or indeed less. Where, however, it is possible to grant a lease of seven years or more, the land not uncommonly commands a high rent for such purposes as sports, and for recreation grounds ; but where building is imminent and it is deemed inadvisable to tie the land up for so long a period, all that can be done is to let it for rough grazing or allotments, or some such purpose.

As regards allotments, it is well to enter a caveat, because if the land is let for that purpose, and is suddenly and urgently required for building, compensation has to be paid to the tenants, and it may well be that that compensation may prove of a most serious nature. For example, to have to compensate the grower of mushrooms when his beds are at their full bearing would involve an amount which might in some cases equal the fee simple value of the land. If, therefore, any land is let for allotments it should only be on conditions which have been very thoroughly considered, and which provide for such serious contingencies.

Again, it is at all times necessary with this class of land to keep a sharp look out for encroachments ; ditches are quietly filled in by some enterprising building neighbour ; lights are opened which may later have a

damaging effect, and in many other ways questions are constantly cropping up which are troublesome from their frequency and from their very smallness.

As regards ditches it may be desirable to point out, as it so often forms a subject of controversy, that the owner of the hedge also claims the ditch for its whole width, however wide that may be, and without any limit of 4 feet or any other number of feet or links. In Middlesex, where the ditches are badly kept, and where the original width is not easily defined, it is usual to allow 4 feet from the stub of the fence; but there are many cases where a considerably greater width may properly be claimed.

At this stage a building estate is by no means an unmixed joy to its owner, and still less is it so to its owner's agent. It is unprofitable and worrying, and one can only admire the subtle humour of the authors of the immortal Budget who justify their "Undeveloped Land Tax" by pleading that the owners wanted, in what I believe is the classic phrase, "ginger," to induce them to turn it to some profitable uses.

Then, again, it is necessary to keep an eye upon the doings of local or borough authorities, so that in the all-important questions of main drainage, the interests of the estate may be adequately safeguarded, and provided with such means of drainage as are necessary. It is probably needless to say that by cordial co-operation with the surveyor of the authority, it is always possible to render him much and very acceptable assistance, which, except in the rarest of cases, will be reciprocated. Every main drainage scheme, therefore, has to be carefully considered.

Again, questions with adjoining owners have to be worked out, such as the straightening of boundaries,

securing through roads, exchanges of land for mutual advantage, and other similar matters.

There are not a few intricate legal questions that frequently arise at this stage. When does a lane become a "new street" is a problem that has for some time puzzled the lawyers, and the only answer they have arrived at so far is that it is a question of fact in each case.

What right of entry has an owner into a public sewer? For house drains his right is unquestioned; but sometimes if he wishes to open up a building estate, and to discharge his new sewers into an existing sewer, the sewer authorities may object on the ground that their sewers are already overburdened, or on other grounds and a long and tedious negotiation, with perhaps an appeal to the Local Government Board, may be necessary, though in the meantime the owner may be paying undeveloped land duty as a punishment for keeping his land out of the market.

Further, the Town Planning Act will no doubt throw upon surveyors the task of co-operating with local authorities in order that the wider issues under that Act may be carefully worked out.

If, therefore, there is plenty of work for the surveyor at this stage, it cannot be said that it is of a directly remunerative character, and all parties concerned are no doubt very glad when some direct return is forthcoming.

Sometimes, indeed, after everything has been done to provide for the expected building development, either from what is inelegantly called "a slump," or from the popular demand finding its way into other directions, the estate may hang fire for years to the great loss and disappointment of all concerned.

Assuming, however, that everything has been done to prepare for building, and that the demand exists, the question arises as to the lines on which the estate shall be developed.

It may be said at once that the overmastering problem of building development is finance. It is probable that every acre of land by the time that it has been covered with buildings has required an expenditure of, in round figures, not less than £10,000, and to raise this money in the cheapest manner possible is the first element of success, and must be so long as this is a competitive business. When it is considered that a great deal, perhaps the majority, of this work is carried on by small builders, it is a matter worthy of note that as a rule the supply of houses is well in advance of the demand.

The methods of dealing with building land are different in different parts of the country.

In London there are, broadly speaking, two ways, viz., the sale of the freehold in plots, and letting on leases for 99 years.

In the north of England a great deal of land is let on a perpetual rent-charge, commonly called a "chief" rent, or failing that on leases for 999 years.

A general account of the various modes of dealing with building land will be found in the Minutes of Evidence of the Select Committee on Town Holdings, which was appointed in 1886 and reported in 1887.

My own experience is almost confined to London and the south of England; for although my earliest professional experience was in the office of a Manchester surveyor, it is, I regret to say, so long since that I have lost nearly all touch with the Manchester practice.

The sale of the freehold in plots has been the

method largely carried out by land companies, who purchase the freehold, make the roads, and then sell the plots on what is called "the nine-years' principle," that is to say, one-tenth of the purchase money is paid at the time of sale, and the remaining nine-tenths are paid in nine annual payments, interest being charged on the unliquidated balance; this interest is, I think, almost universally 5 per cent. per annum. The purchaser is usually given a free conveyance if he accepts the title of the vendors without investigation, and almost invariably this is done. The purchaser has, of course, the right to pay up the whole of his instalments before the time named if he chooses to do so, and if he has good luck and sells his houses he does so in order to make a title. He very frequently, however, buys the freehold plots himself and then grants 99-years leases at ground rents which give him a substantial profit on the land, which profit, however, is more apparent than real, because by fixing a high ground rent on the property he not infrequently sells the house at cost price or even in some cases at below cost price, and is content to take the profit on his creation of ground rents.

Although the leasehold system has had its fair share of abuse, it is worth remarking that on estates where the purchasers have the option of taking a lease or buying the freehold they generally prefer the lease to the freehold on account of getting their houses at a considerably reduced outlay in the first instance. On an estate of over 200 houses which has been developed in the last few years, and where the tenants had the option of the freehold or a lease, in only three cases has the freehold been purchased, and in all three cases the premises were trade premises.

The objection to the development of land by selling

the freehold in plots is that no one has a sufficient interest in the reversion to exercise control from time to time and to see that the estate is kept up to a proper level; some of the worst property has been built on freehold estates, and the subsequent history has been by no means happy. Undoubtedly, the best estates are those of the large landlords who keep the freehold of the ground in their own hands, and who are able to secure the best after management of the entire property.

In dealing with leasehold estates again there are more methods than one. It sometimes happens, as in the case of corporate bodies, that they have the land but no funds to develop it, and in such circumstances it is usual to let it in large blocks to a speculator who will make the roads and carry out the whole development of the estate.

The usual method of dealing with a transaction of this kind is that leases are granted by the ground landlord as the houses are roofed in, at ground rents which must not exceed, say, one-sixth of the rack-rental value. Thus, assuming that 10 acres of land are so let, that the freehold value of that land is £1,000 per acre, and that the rental value of it on lease is £50 per acre, and that it is possible to build 20 houses per acre of the rack-rental value of £36 each, the speculator would secure £6 on 20 houses, or £120 per acre; but as he is only liable for £50 per acre there is generally a settling up in respect to each acre, that is to say, when he has secured a ground rent of £6 on eight houses, or £48 in all, he is then entitled to a lease of a plot of land which with half the roads and houses already leased will comprise 1 acre. This is granted at a ground rent of £2, which is about the lowest amount which is worth collecting half-yearly, and which with the £6 secured on each

of the eight houses built amounts to the £50 an acre as agreed.

The lease of this remaining portion is what is generally called a "residue" or "remainder" lease.

The speculator has thus fourteen more plots on which he can secure £6, or if he cares to do it on this part of the land, the limitation of one-sixth of the rack-rental value not applying, a higher ground rent than one-sixth of the rack-rental value; but, of course, the higher the ground rent in proportion to the rack-rental value, the fewer the number of years' purchase which he can obtain for these so called improved ground rents. Generally speaking, an improved or leasehold ground rent sells for about five years' purchase less than a similar freehold ground rent; they are, I believe, largely bought by insurance companies, whose methods of business easily enable them to set by the sinking fund necessary to compensate for a melting or terminable security.

Thus, acre by acre, the whole of the 10 acres would be covered.

The profit on a transaction of this kind represents a substantial gross sum, but it has to be remembered that out of this profit the speculator has to recoup himself for his outlay upon roads; and in all probability, unless he is very fortunate, for losses on financing builders, the delay in getting the land covered, during which time he is standing out of interest on his roads; for the peppercorns which he has to grant to his builders, which however is partly or wholly covered by the peppercorns which he receives from his ground landlord; and for many other incidental expenses.

The whole question of profit or loss is entirely speculative. If everything goes right he probably makes

a handsome profit, but if everything goes wrong he is just as likely to make a substantial loss.

The so-called peppercorn consists, of course, in a rising rent, and on a letting such as that under consideration, the terms would probably be:—

A grass rent for the first year;

£100 for the second year;

£200 for the third year;

£300 for the fourth year;

£400 for the fifth year;

£500 for the sixth and subsequent years of a 99 years' lease.

In cases where the freeholder makes the roads the *modus operandi* is very similar, the difference being that the ground rent is higher and the balance on the residue lease correspondingly smaller. In such a case as the foregoing, the builder would pay the ground rents as already set out with an addition in each case of 5 per cent. upon the cost of the roads, which may be taken for that class of property, at a rough approximation, at £300 per acre, a figure, however, which it is only right to point out may vary considerably, because the larger the plots the less road-making is required per acre.

Where the ground landlord makes the roads there is this great advantage: he can then deal direct with the builders, and the profits of a middle man are entirely avoided; a better class of builders can be obtained, and these, by improving their ground rents in the manner already indicated, can obviously afford to sell their houses substantially cheaper than builders who pay the full rack-rental value and make no profit out of the land.

There is a third system which is adopted where the ground landlord is prepared to take risks, or where the

developer is a speculator who has purchased the land, and that is, to make the roads and to let the land at practically its full value, making liberal advances to the builder as the work proceeds, and giving him some return either in the way of bonus or allowing him to improve upon his ground rent.

The manner of conducting these operations and the various points arising on them may probably best be summarised by considering the form of a building agreement, and I submit for that purpose the form which is in use by my own firm, and which has been drawn up to meet the contingencies of these various arrangements.

Who the original parent of this agreement was I do not know, or I would render him suitable acknowledgments, but it has been altered from time to time, and added to to meet difficulties and legal decisions which have cropped up in the course of years, and I doubt if he now would recognise it. The form is given in the Appendix, and I do not propose to read it, but only to make some necessary comments.

Clause 1. *Builder's right of entry*.—The object of this clause is to prevent what sometimes happens, a builder obtaining a building agreement and not going on with his operations, probably never having intended to do so, but merely hawking the agreement about and seeing if he can sell it to anyone else. If proper inquiries are made as to the status of the builder dealt with this ought rarely to occur, but the clause is retained because it sometimes has a value in unexpected directions.

Clause 2. *Agreement to build*.—The clause, it will be seen, relates to dwelling-houses only. If shops or premises other than dwelling-houses are intended, an

alteration is made, generally in the form of an additional clause.

Clause 3. *Quality of work.*—The specification referred to, which is not here given, has no longer much value, as in consequence of the increasing stringency of the by-laws of the local authorities it is not now so necessary to insert a specification on behalf of the estate as it formerly was. I should, however, like to suggest that it is desirable to stipulate that a damp course should be inserted in all brick fence walls at 6 inches above the ground level. The advantage of that in the subsequent life of the wall is such that it is most important to secure it.

Clause 7.—It will be noticed that the clause refers here to the “surveyors to the freeholders.” This agreement is so drawn up that it may apply not only to the case of a ground landlord letting direct to the builders, but it also applies to those cases where the ground landlord having let a block of land to a builder the builder sublets to other builders. By very slight modifications this agreement can be made to apply to either event.

This observation will explain references throughout the agreement to the “surveyor to the freeholders,” and the “surveyor to the landlords.”

Clause 8.—The clause stipulates that the builder shall insure to at least three-fourths of the full value, but generally speaking most prudent people insure to the full value.

Clause 14.—The lease itself is usually a standard form. There should be a plan on it on which should be marked the actual dimensions carefully measured when the walls and fences are built, T-marks showing the ownership of fences and P W-marks showing which are party-walls.

The plan should also have sufficient identification marks (by relation to other streets or otherwise) as will serve to fix the location of the property should the number or name of the house be subsequently altered, as so often happens in the case of a long lease.

As each lease is granted it is delineated on the estate office "marking-off map," on which should also be entered the figures and other characters on the map attached to the lease.

On this map also will be shown the limits of the residue leases, which, where there are a number comprised in the building agreement, may be conveniently numbered "Residue lease No. 1," "No. 2," and so on.

The appearance of this map when the building is finished will be somewhat as on page 496.

The number in the circle (247) refers to the progressive or filing number of the plan submitted for approval.

Clause 19.—It may be desirable to point out as regards this clause that it is very doubtful if it has any value unless this charge upon the builder's plant and materials is registered as a bill of sale.

Clause 21.—On the map attached to the building agreement should be shown:—

- (1) The line of building frontage ;
- (2) The blocks of the houses if terrace houses. It is not desirable to allow more than twelve houses in a block ; and the better the class of house the fewer should there be in each block ;
- (3) The measurements, stated to be approximate as before mentioned ;
- (4) The north point ;
- (5) Any further identification marks if any are necessary.

This building agreement has been found in practise to do its work satisfactorily. I am disposed to think, however, that it wants strengthening in the direction of providing for the state of the law which has been brought about by the decisions of the Courts on the question of light, and by the legal doctrine that a man may not derogate from his own grant. These decisions and that doctrine have been carried to a very far-reaching extent, and, if I may say so without presumption, it is a question as to whether they have not been carried too far. That question is one, however, which is too complicated to enter upon here, but we are at present considering what additions can be made to the form to provide for this point.

If it is intended to finance the builder, a schedule of advances must be attached to the agreement, and clauses for securing the advances, which should be prepared by a solicitor, but of which an example is given in the Appendix.

Such is an outline of the usual method of dealing with leasehold estates which is largely in use in London, and no doubt in its general lines throughout the country.

The underlying idea of this agreement is to finance the builder by allowing him to create improved ground rents and sell them in the open market, but if the freeholder will himself buy them, a simpler plan is to purchase them in blocks of, say, four at a time. Thus, if the land is let at a price which works out at £3 per house, and the builder secures £5 10s. per house, and the freeholder agrees to buy these at twenty or other number of years' purchase when the lease of every fourth house is taken up, the builder draws four times £2 10s., multiplied by the years' purchase, which is "a very present " help in time of trouble."

It is very desirable that surveyors who have to negotiate so many of these matters should have a general knowledge of the legal principles that are involved in the question of covenants which run with the land. These have been largely developed by lawyers in the last twenty years, and it is useless stipulating for provisions which in the end are held to be non-applicable because they do not run with the land. A general knowledge of covenants which run with the land and those which do not ; of the difference between negative and affirmative covenants ; of breaches which are continuing, and of those which are prejudiced by the acceptance of ground rent, and so on, are matters which surveyors are constantly being called upon to deal with, and with which, therefore, they should be familiar in a general way.

It is not possible in the limits of a short Paper like this to enter upon them more largely. All of us, however, who have the subsequent management of building estates must be impressed with the greatly superior advantages of a lease as compared with the freehold in respect to the subsequent good management of a property.

As regards the laying out of estates, there are a number of points which are well worth consideration.

Road-making itself is a fairly simple matter, because the main lines of a specification are rigidly fixed by by-laws. Nearly every parish has its own pattern of man-holes, and there is very little that can be said of any value on the question of the actual construction.

Personally, I am in favour of making the roads to a high standard in the first place, but here I know there is great difference of opinion. A well-made road which will stand the wear and tear of building prevents an estate from getting into the horrible condition that is

not uncommon in the course of the development of a building estate; and, moreover, the subsequent cost of making up by the local authority is substantially less. The increased cost makes itself felt, of course, in increased ground rent, but the difference is negligible, and the advantages in my opinion quite preponderate.

As regards the laying out of roads a few simple principles may be laid down.

First, it is better to have as many roads leading out of main roads as possible. This involves making the roads at right angles to the main roads instead of parallel, as is sometimes done, the parallel roads leading out of other roads which themselves lead out of the main roads.

Secondly, where possible it is better to have the roads running north and south. In that case, every room in every house gets the sun either morning or afternoon, whereas if the roads lie east and west, the rooms looking north never get the sun.

This is a counsel of perfection, and can only be achieved other things being equal; the shape of the estate, such inexorable barriers as railways, the levels of the land, and many other points have to be taken into consideration. Moreover, the position of the public main roads is already fixed and unalterable.

Thirdly, I for one cannot see the serious objection to what are generally called "*culs-de-sac*" though why they should not be called by the equally expressive and more English phrase "*dead ends*" I do not know. One thing is certain; they are quiet, and quietness in a large town is an immense advantage.

The ideal to be aimed at in all cases is simplicity of planning, giving convenience of access and freedom from acute angles.

Generally speaking, it is better that roads should run down the slope than at right angles to it; where the slope is material, it is very difficult to get the drains from the backs of the houses on the lower side into the sewer in the road.

Our English streets leave much to be desired, but probably no cause has contributed more to this than cast-iron by-laws, which have much to answer for. There seems, however, to be a probability of a more reasonable attitude in this respect being adopted in the near future.

After the roads have been laid out, there are still questions of planning, because it is impossible to provide right angles to every plot.

There is one matter to which personally I have a great objection, and that is, that where there is an acute angle between two parallel roads and the main road, as shown on the sketch opposite, we sometimes see the houses set back from the road in steps. This always appears to me to indicate poverty of ideas in planning.

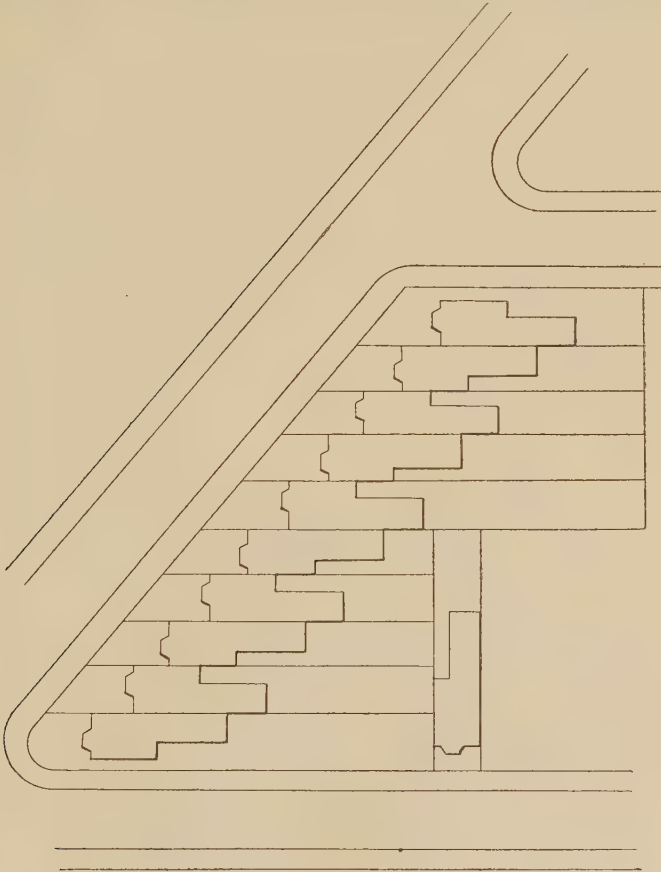
The sketch on page 502 shows a similar way of dealing with the same problem, and I venture to think a much better one. The larger the class of house the easier it is to vary the plans of the two corner houses. This sketch is, of course, merely a suggestion that the way to deal with corner sites such as these is so to vary the plan so as to fit the corner pieces. This may add a little to the cost, which is however more than recouped by the gain of two plots.

Such is a brief outline of the methods by which the development of land for building has hitherto proceeded in this country.

Perhaps a Paper of this kind may not be considered complete unless some reference is made to the revolution

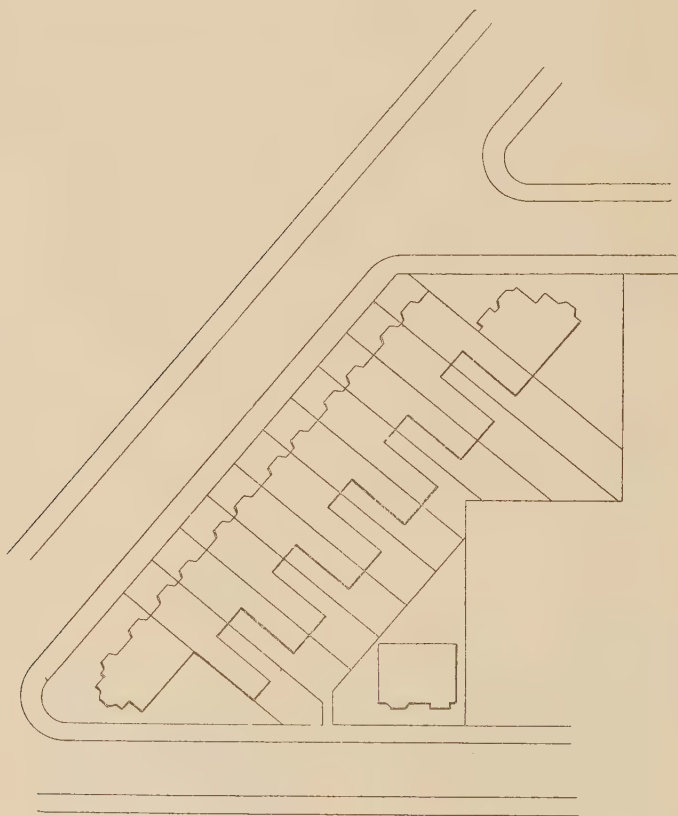
which must necessarily result from the special taxes which have been imposed upon this particular industry.

Its authors claim, I believe, that the Finance (1909-10) Act, 1910, will have the effect of stimulating



building development. "The clouds we so much dread" may be "big with mercy," and "may break with blessings" "on our heads," or—they may not; but whatever they do it requires a strong effort of the imagination to see how

these proposals can stimulate the development of land. They may, and it is reasonable to suppose they will make owners more than ever disposed to sell or to let, but the building developer will not be any more disposed either to buy or to hire; in all probability he will be quite the reverse.



It would not be becoming in this place to discuss the policy of these special taxes, but we, as surveyors who have to deal with the altered conditions, can very properly consider the nature of the alterations which

have been made, and how they will affect our legitimate business.

The feature which appears to me to be of the most serious nature is the exclusion of interest on money paid for land and sunk in road making and other ways, and I think it is not unfair to state the effect of these new taxes on the land developer as being an income tax at 4s. in the £ on an income which he does not receive.

Land development schemes may be roughly divided into three classes: (1) Those resulting in large profits; (2) Those resulting in heavy losses (the files of the Bankruptcy Court contain abundant evidence of these); and (3) Those resulting in a small profit or loss or neither.

Take as a typical instance of a land development scheme one resulting in neither profit nor loss.

	£
A seaside estate costs	15,000
There is expended on it in sea wall, sewerage, roads, water supply, and other items for which credit would be given under the Finance Act	40,000
Interest has to be paid to bankers during the course of development	37,000
	92,000
When the whole estate has been developed it is found that the proceeds of the sale of it amount to	92,000
Profit	Nil.

It will thus be seen that the result of twenty-six years' working is absolutely nil, which may be described as a disastrous result.

Let us now see how this is treated under the Finance Act:—

	£
Proceeds of sales	92,000
Under the Finance Act credit will be given for the original cost of the land	£15,000
10 per cent. would be allowed on this	1,500
	16,500
Credit capital expenditure as above	40,000
	56,500
Theoretical increment subject to 20 per cent. duty	£35,500
Increment duty payable	£7,100
Plus undeveloped land tax in the meantime	—

It will thus be seen that on a transaction extending over the better part of a man's business life, he not only has spent the whole of his time for no reward, but he is actually fined something between £7,100 and £10,000 for embarking in and carrying out a transaction which is not only a legitimate one, but which the authors of the Finance Act assert is so commendable that their measure will encourage it and similar transactions.

Now compare this with another transaction. A man buys an estate for £10,000, and sells it within three months for £11,000, which represents interest at the rate of 40 per cent. per annum. He entirely escapes increment duty. The purchaser in turn sells it to another man almost immediately at £1,000 profit, and pays nothing in the way of increment duty; he again

sells it for £1,000 profit, but this time increment duty becomes payable, on no principle whatever except the purely arbitrary one that these 10 per cent. allowances must not exceed 25 per cent. in five years.

What is the inevitable result of such a system of taxation? Obviously, unless there is a certainty of enormous profits which can cover almost any demands, no prudent person would embark on a transaction requiring many years to work out, involving an enormous charge for interest in the meantime, and yet carrying with it the liability to taxation based upon the entirely false assumption that no such heavy liability as compound interest is to be taken into account. And yet this accumulating interest is the essence of such transactions as the Letchworth Garden City, and many seaside estates, and is a most important feature in all such transactions.

Building development is at all times an uncertain speculation, and it seems to me that unless some more common-sense view is taken of these matters it will be the height of indiscretion for anyone to undertake the development of more than an acre or two at a time.

Even the undeveloped land duty, which is justified as a means of bringing more land into the market, and so stimulating the supply of available building land, becomes, in the case of these estates requiring many years to work out, a most oppressive burden. Land which, as in the case above mentioned, is of comparatively little value, which requires a heavy initial outlay, and which becomes valuable only on account of the enterprise and large expenditure of its owners, becomes after twenty years liable to undeveloped land duty.

Great play has been made on political platforms with the fact that this undeveloped land duty is "only a

“halfpenny in the pound.” But even a halfpenny in the pound may work out at temporary confiscation. Take the case of my seaside resort just referred to—land that may have been bought for £10 an acre may have had so much money sunk in developing it that in order to get it back it may not show any profit if sold for £1,000 per acre. It may be standing idle because its time has not come, and yet have to pay a tax of £2 1s. 8d. per acre because its owner has turned it from land worth £10 per acre into land worth £1,000 per acre.

Even if the £1,000 per acre were yielding 4 per cent. per annum, a tax of a halfpenny in the pound on the capital value means an income tax of 1s. 0½d. in the pound; but as it yields nothing and cannot be made to yield anything until it is actually required for building, this tax cannot be regarded in such a case as anything but a tyrannous exercise of the power of the purse.

The object which the authors of the measure had in view is quite clear, viz., to prevent a man holding up his land for more than twenty years, and so only giving him relief on the ground of his expenditure for that period; but they either did not know, or had lost sight of, or were too obsessed with the “holding-up” bogey, or were too much in need of money, to have regard to the just claims of those who are engaged in these long-drawn-out transactions.

Wren Hoskyns in his *Chronicles of a Clay Land Farm* makes an acute observation that whereas many an excellent measure is rendered nugatory in its administration, so many a vicious measure is made tolerable in its administration. That is the substance, though not, perhaps, the *ipsissima verba* of what he says, and it is quite possible that in the administration of this Act its inconsistencies and offences against fair dealing may be so toned down as to render it more in

accordance with what we are accustomed to regard as fair play. If so, it would be a matter of immense convenience to the land-developing class which it is desired to encourage if they knew how they were going to be treated in regard to these and many other similar problems. What hope there is for this consummation is at present beyond the wit of most of us to speculate.

The feeling that has inspired this measure no doubt had its origin first in a belief that enormous profits are made out of land speculations, and secondly that without any effort on the part of the lucky landowners their land greatly increases in value in the neighbourhood of large towns. The public eye is caught by such cases when they occur, but it is blind to the cases where heavy loss is the result. How many solicitors and surveyors have been ruined by land speculations.

Even among people who ought to know better one frequently hears the most extravagantly sanguine estimates, as in the case of a witness who some time ago in my hearing gave evidence that certain land would be worth £1,000 an acre when ripe for building. When asked how long that would be, he replied, "Probably in "five years."

Now as this was land not well placed and three miles outside the London building fringe, and as London spreads at about the rate of one mile in twenty-five years as near as can be, it is obvious that the witness spoke without reflection. The five years have passed some time now, and the land to-day is worth less now than then. If an account could be taken of all the money invested in suburban land I venture to think the results would be not a little surprising to the optimistic. My own experience may be summed up in these words: "Never buy suburban land to look at."

the ground for the foundations and drains necessary and proper for the dwelling-houses hereinafter agreed to be erected and construct and complete the said drains and erect in carcase on each of the said pieces of ground one dwelling-house with the necessary vaults areas offices and outbuildings and will to the like satisfaction within calendar months from the expiration of the time within which the said dwelling-houses are respectively hereinbefore agreed to be erected in carcase completely finish the same fit for habitation and enclose them where the Landlord or h Surveyor shall think necessary or direct and to h satisfaction with proper boundary walls or fences and iron or other palisading. The Builder shall at h own expense if and when required by the Surveyor of the Landlord and to h satisfaction erect and maintain in good repair a temporary fence round the said piece of ground.

3. The Builder will make and perform the excavations and bricklayer's mason's carpenter's and all other works necessary to erect and complete the said dwelling-houses and other buildings (hereinafter collectively described as the buildings) in a substantial and workmanlike manner with good new sound proper materials throughout and according to the Specification given in the Schedule annexed hereto and so that the buildings shall with respect to the situation thereof and the building line number of feet length and depth form and elevation in front and order of work height and pattern of front fence and side and back garden walls or fences and in all other respects be erected and completed agreeably and conformably to plans and elevations to be previously submitted to and approved in writing by the Landlord or h Surveyor who shall be furnished with a copy or copies of such plans and elevations for h use by and at the expense of the Builder .

Quality of
work.

4. The Builder will expend in labour and materials alone in the erection of each of the dwelling-houses to be erected upon the piece of ground numbered and the offices and outbuildings in connection therewith the sum of

Cost.

£ at the least and of each of the dwelling-houses to be erected upon the piece of ground numbered and the offices and outbuildings in connection therewith the sum of £ at the least and of each of the dwelling-houses to be erected upon the piece of ground numbered and the offices and outbuildings in connection therewith the sum of £ at the least.

Boundary wall or fence in certain events to be party wall or fence.

5. If the Tenant or Lessee of land adjoining any of the pieces of ground hereby agreed to be demised shall have erected a good and sufficient boundary wall or fence at the rear or side of any of the said pieces of ground before such Leases as provided for by these presents shall have been actually granted to the Builder or his Nominee or Nominees the Builder shall pay to such adjoining Tenant or Lessee such a sum as the Surveyor of the Landlord shall decide to be the fair value of half such wall or fence or in case a higher or more expensive wall or fence than is requisite shall have been erected as aforesaid then such a sum as the said Surveyor shall decide and upon such payment being made such wall or fence shall be a party wall or fence and in case the Builder shall have first erected any such wall or fence the provisions lastly hereinbefore contained shall extend to and be applicable as to payment in respect of the same by the adjoining Tenant or Lessee to the Builder although the Landlord shall not nor will incur any personal liability in respect thereof in either of the cases above mentioned.

Compliance by Builders with Building Acts &c.

6. The Builder shall at his own expense in the execution of the works aforesaid comply in all respects with the Building and other Acts and the regulations of the Local Authority and execute and do all works and things required by any such Acts or regulations relative thereto and pay and indemnify the Landlord against all fees charges penalties claims and expenses to be made or incurred thereunder or which may be payable for obtaining the approval of the Local Authorities to any of the works or matters aforesaid.

7. The Builder will from time to time upon demand pay to the Landlord a due proportion of the expense of keeping the road and pathway abutting on each of the said pieces of ground and the drains sewers and appurtenances thereof respectively in repair until adopted by the Local Authority such proportion to be fixed in case of dispute by the Surveyors to the Freeholders.

Road and
sewer.

8. During the erection of the buildings the Builder shall insure them and keep them insured from damage by fire in the Royal Exchange Assurance Office in three-fourths at least of the full value thereof in the joint names of the Freeholders the Landlord and the Builder and shall produce the policy or policies of such insurance with a receipt for the current year's premium to the Landlord or his Surveyor or Agent whenever required so to do.

Insurance.

9. The Builder shall not use the said pieces of ground or any of them or any part or parts thereof for stacking or keeping timber or building materials except during the progress and for the express purposes of the buildings and shall not do or permit thereon any waste spoil or nuisance nor make any obstruction whatever in the adjoining roads nor suffer to be erected on any of the said pieces of ground any booth or show or any temporary erection except sheds to be used in erecting the buildings which sheds shall be removed as soon as the buildings are completed and shall not use any of the said pieces of ground or the buildings or permit or suffer the same to be used as a Hospital establishment for lunatics or advertising station or as a public-house tavern or beershop nor set up thereon any steam engine nor carry on or exercise or permit to be carried on or exercised on any part thereof any trade or business nor make or burn any bricks thereon nor do or permit or suffer to be done thereon any act or thing whatsoever which may cause forfeiture of the Agreement or Lease under which the Landlord may hold the same or which may become dangerous or a nuisance or annoyance to the Landlord the Freeholders of the ground or the neighbourhood.

User of
ground
pending
erection of
Buildings.

Soil not to
be removed.

10. No part of any of the said pieces of ground shall be dug out lower than required for the buildings and drains and no brick or other earth clay sand loam or gravel shall be sold or disposed of or be removed from the premises except where necessary in the performance of the works and with the previous written consent of the Surveyors of the Freeholders.

Landlord's
right of
entry to
survey.

11. The Landlord and the Freeholders of the ground and their respective Architects and Surveyors shall have full liberty at all times to enter thereon and view the state and progress of the buildings and works and the materials used and intended for use therein.

Rent.

12. The Builder will in the meantime and until a Lease or Leases shall have been granted in pursuance of the Agreement in that behalf hereinafter contained of the said several pieces of ground pay unto the Landlord the several yearly rents following that is to say for the first year to the day of a peppercorn for the second year from the same day the sum of £ and for the third and every subsequent year from the same day the sum of £ each of such yearly rents to be paid by four equal quarterly payments on the usual quarter days in every year and the first of such quarterly payments to be made on the day of but so nevertheless that from the yearly rents for the time being payable under this present Agreement there shall always be deducted the yearly rent or rents (if any) which shall for the time being have been reserved and become payable under any Lease or Leases which shall then have been granted in pursuance of the Agreement in that behalf hereinafter contained and so that if the total sum of the rents which shall at any time have been reserved and become payable upon any such Lease or Leases shall be equal to or exceed the rent for the time being payable in pursuance of this Agreement such last-mentioned rent shall wholly cease.

Granting of
Leases.

13. When and so often as the Surveyor of the Freeholders shall certify in writing that the buildings upon any of the said pieces of ground have been erected covered in

and drained the external work completed the vaults and areas built the boundary walls or fences and iron or other palisading completed and the terms of this Agreement in other respects complied with by the Builder up to the date of such certificate the Landlord will by deed grant or at his option procure to be granted by the Freeholders to the Builder his nominee or nominees and the Builder his nominee or nominees will (without requiring production of or investigating the Lessor title) accept a Lease or Leases of such piece or pieces of ground with the buildings thereon and the appurtenances thereto (except and reserved out of such Leases the free passage and running of water and soil from any other premises of the Lessor through any channels or drains upon or under the same piece or pieces of ground) for a term of ninety-nine years from the day of 19 at a yearly rent to be approved by the Landlord but not to exceed one equal sixth part of the rack rental value of the property to be comprised in such Lease or Leases when completed and finished fit for habitation or use and so that no rent in any Lease shall be less than £2 and so that in case more than one house is included in one Lease each house shall be liable only in respect of the covenants relating to the same and the appurtenances thereto as aforesaid and not in respect to the covenants relating to any other house or premises but unless the rent is apportioned by the Lease all the premises therein comprised shall be subject to the rent thereby reserved. Such rent is not to exceed in the aggregate £ per annum and is to be payable quarterly on the usual quarter days without deduction.

14. Each Lease to be so granted shall be (if granted by the Freeholders) in the form marked "A" deposited at the place of business of the Landlord Surveyor at or (if granted by the Landlord) in the form marked "B" also deposited as last aforesaid or as near thereto as the circumstances of the case will admit and the Builder and his nominee or nominees shall execute a counterpart of the Lease. The Lease and Counterpart shall be prepared by the Solicitors of the Freeholders or of the Landlord as

Form and
cost of
Lease.

the case may be at the cost and charges in all respects of the Builder or his nominee or nominees. Such cost and charges if such Lease shall only comprise one house shall be

for the preparation of such Lease and Counterpart (exclusive of stamp duty and registration) and if the Lease shall comprise more than one house the Builder or his nominee or nominees shall pay the sum of

for each house so comprised over and above the first house except for Residue Leases the fee for each of which shall be

The Builder or his nominee or nominees shall also pay a fee to the Surveyor of the Landlord for approving the plan of each house or building equal to the fee payable to the District Surveyor under the London Building Act and the fee of for the survey for the plan to be drawn on each Lease and for drawing such plan on the Lease and Counterpart unless such Lease shall comprise more than one house in which case the fee shall be in addition for each additional house and in the case of the Residue Leases the fee shall be in each case.

Covenants
under
Residue
Leases.

15. In case more than one dwelling-house is comprised in any such Lease the rent thereunder secured shall not be apportionable between such dwelling-houses, but all the restrictive and other provisions as to building and user of the premises therein contained shall apply to each house separately.

Rent &c. to
be paid up
before Lease
granted.

16. The Landlord shall not be bound to grant or procure to be granted any such Lease as aforesaid until all arrears of the rent hereby reserved and all other sums of money hereinbefore agreed to be paid and all other moneys (if any) at the time owing by the Builder to the Landlord and the claim (if any) of the adjoining tenants or Lessees in respect of party walls or fences shall be fully paid and satisfied.

Provisions
in form of
Lease to be
observed.

17. Until such Leases shall be respectively granted the Builder will perform observe and fulfil all the covenants provisions and agreements contained in the said forms of Lease marked "A" and "B" respectively and on the part

of the Lessee to be performed observed and fulfilled so far as they are applicable in like manner as he would be bound to do if such Leases had been respectively granted.

18. The Builder shall not without the previous consent in writing of the Landlord or h Surveyor assign sublet or part with h interest in this present Agreement or the benefit thereof or any part thereof.

Agreement
not to be
assigned
without
leave.

19. The Builder or h nominee or nominees shall not remove or permit to be removed (until after the completion of the said houses and other works in accordance with the provisions and stipulations herein contained) without the consent in writing of the Landlord or h Surveyor any of the building materials or other things which shall be brought or deposited upon the said piece or pieces of ground or any part thereof or upon any road or passage adjoining thereto for the purpose of erecting and completing the said houses and other works and any building materials and all other things which may have been brought upon the said piece or pieces of ground or upon any road or passage adjoining thereto shall become the property of the Landlord and be considered as immediately attached to the buildings to be erected or in course of erection upon the said piece or pieces of ground on which such building materials or other things may be deposited or (as to such building materials or other things which may for the time being be deposited upon any such road or passage as aforesaid) to the buildings for the erection or completion of which the same may have been provided.

Building
materials
on site.

20. If the whole or any part of the said yearly rents or any of them hereinbefore agreed to be paid by the Builder until the granting of the said Leases shall be unpaid for the space of twenty-one days next after any of the days hereinbefore appointed for payment thereof whether the same shall have been legally demanded or not or if the Builder shall fail to observe or perform the agreements herein contained for building upon the said pieces of ground or any of them within the periods and according to the stipulations hereinbefore mentioned or shall in any respect fail to observe

Power to
re-enter on
default.

or perform any other agreements herein contained on h part or if the Builder shall become bankrupt or shall assign h Estate or effects or any part thereof in trust for h Creditors or shall make a composition with h Creditors or the major part of them in number or value or if any execution or any other legal process shall be issued against h by virtue of which h interest in this Agreement or the benefit thereof or any part thereof shall be liable to be taken or disposed of or if the Builder shall assign sub-let or part with h interest in this present Agreement or the benefit thereof or any part thereof without the previous consent in writing of the Landlord or h Surveyor or if the Builder shall from any cause make default in continuously and effectually advancing and executing the erection and completion of the buildings and works hereinbefore agreed to be performed and (prior to the time when the largest amount of ground rent herein contemplated and ultimately to become payable shall have been fully secured) such default shall continue for the space of two calendar months or more after notice in writing under the hand of the Surveyor of the Landlord shall have been delivered to the Builder or sent to h by registered letter at h usual or last known place of abode in England requiring h to put an end to such default then and in either or any of the said cases and at any time or times thereafter it shall be lawful for the Landlord into and upon so much of the said ground and premises as shall be undemised or any part thereof in the name of the whole to re-enter and take possession of the said ground and premises together with all buildings and erections and materials thereon without making to the Builder any compensation or allowance in respect thereof and this Agreement shall thereupon as to the premises so entered upon cease but such right of entry shall be deemed a cumulative remedy and shall not prejudice any right of action or other remedy of the Landlord for the recovery of any rent or moneys due to h by the builder or in respect of any breach by the Builder of this Agreement.

21. These presents shall operate as an Agreement only and not as an actual demise of the said several pieces of ground or the buildings to be thereon erected nor to give the Builder any legal interest in the said pieces of ground respectively except so far as to create a strict tenancy-at-will on the part of the Builder upon the terms aforesaid and to entitle the Landlord to the like power and remedy by distress or otherwise for the recovery of the rent to become due under these presents as if the said Leases had been actually granted and such rent had been reserved thereby.

Tenancy-at-will until Leases granted.

If it is intended to finance the builders the following further clauses may be added :—

The Lessor will advance and lend or procure to be advanced and lent to the Lessee upon his executing a Mortgage or Charge of this Agreement and the Land and Buildings comprised therein in favour of the Lessor or his Nominee in such form as the Lessor's Solicitors shall approve (such charge to be prepared by the Lessor's Solicitor at a cost to the Lessee of exclusive of stamp duties) such sums of money as are mentioned and at the stages mentioned in the Second Schedule hereto for and in respect of each house built by the Lessee on the land comprised in this Agreement provided the same is built according to the provisions contained in this Agreement, but it is expressly provided that the Lessor shall not be bound to make any or either of such advances unless and until their Surveyor shall have certified in writing that the building and works in respect of which such advance is to be made has been done and executed or completed as the case may be to the satisfaction of such Surveyor and in conformity with this Agreement and the fees of the Lessor's Surveyor paid for inspecting and reporting upon the property for the purpose of such advance (at the rate of for each survey) and the Lessee shall have duly observed all the clauses and agreements herein contained and have duly paid all interest due on the advances made such advances to

carry interest at the rate of per cent. per annum
from the date of each advance.

No Lease to be granted by virtue of this Agreement shall be granted by the Lessor to the Lessee or his nominee unless and until every sum of money advanced by him upon the security of these presents with interest thereon at the rate aforesaid shall have been repaid by the Lessee to the Lessor unless the Lessor shall consent to do so.

In consideration of the advances to be made as aforesaid the Lessor may if he thinks fit so long as any money remains due and owing to him under this security grant a Lease of each plot of land and buildings before the same are completed pursuant to Clause set out on page 3 hereof and the Lessee will execute a counterpart thereof and a legal mortgage of the leasehold premises when the Lease has been granted as aforesaid to secure to the Lessor the amount due to him at the time of executing such mortgage with interest after the rate aforesaid and the Lessee will pay to the Lessor's Solicitors their proper costs and expenses of the preparation and completion of such mortgage and the registration thereof.

If the Lessee shall perform all the agreements and conditions on his part hereinbefore contained and shall pay off the advances made upon each house together with interest costs and any expenses thereon and shall take up a Lease of each house in pursuance of Clause as set out below he shall be entitled to a bonus of in respect of each Lease so taken up as aforesaid.

When the said Buildings and Works hereby agreed to be erected and performed by the Lessee as aforesaid shall have been completely finished to the satisfaction of the Lessor or his Surveyor for the time being and such Surveyor shall have granted his Certificate in writing to that effect the Lessor shall grant unto the Lessee or his Nominee a Lease of each of the said plots of land and the buildings erected thereon with the appurtenances for the term of ninety-nine years computed from the at the yearly rent of

payable quarterly on the twenty-fifth day of March the twenty-fourth day of June the twenty-ninth day of September and the twenty-fifth day of December in every year free from all rates taxes charges assessments and deductions whatsoever (except the Landlord's Property Tax) the first of such quarterly payments to be made on the and every such lease shall contain the several covenants clauses provisions and agreements set forth in the form of Draft Lease marked as aforesaid.

The Lessor shall not be bound to advance to the Lessee in pursuance of the provisions as set out on page 1 hereof more than the sum of at any one time being advances in respect of houses it being the intention of the parties that the Lessor shall only have the risk of advancing upon houses at one time and if the Lessee shall commence the erection of more than houses at once he shall not be entitled to call for advances upon more than houses until he shall have paid off advances on others so as to leave the total advances upon houses only.

DISCUSSION.

Sir ALEXANDER STENNING (Past-President) said he had much pleasure in proposing a hearty vote of thanks to Mr. Done for his carefully prepared Paper, which, so far as his (Sir Alexander's) experience went, touched on nearly every point that arose in the development of land. He could not agree with all the points raised, but the author's survey of the whole subject was masterly, and if the junior Members, when building land was put into their hands to develop, would read and study the Paper, they would find Mr. Done's advice most useful.

There were so many who were desirous of taking

part in the discussion that he did not intend to take up much of their time with his remarks.

Mr. Done advocated long leases of, say, 999 years for chapel sites instead of freeholds, so as to allow the owner to retain some control over the estate. That was a good suggestion, for otherwise, if the freehold were granted, the idea of a chapel might be given up and the site turned to some other use, and the freeholder or his agent would have no redress. So in the case of cottages on building estates round London it would be much better for the freeholder to keep control over his land under a 99 years' lease than to sell the freehold to energetic people who went about the country anxious to erect cottages ostensibly for the benefit of the labouring classes. He would then be able to look after the repairs of such property, for perhaps no property got so much out of repair as cottages, and unless some controlling power existed between the tenant and the sanitary authorities, who did not always look after matters as well as they might do, great harm might be done. Therefore in letting land for cottage property public advantage required that the control should be retained by the freeholder.

He agreed with Mr. Done that the leasehold system had worked well in this country in the past by providing houses for the people and by providing a means of laying out land in a sensible and proper way.

One of the chief objections to *culs-de-sac* in London was the fact of there being no outlet or means of escape in case of fire; but when visiting the Hampstead Gardens Estate the other day he noticed that a number of small *culs-de-sac* had been built. These took the form of short by-roads with six or seven houses on each side, and certainly appeared to give a great deal of quietude.

The Hampstead Garden Suburb was within the boundary of the Hendon Rural District Council, and did not come under the London Building Acts.

Mr. Done's advice as to the desirability of cordially co-operating with the local authorities was good, as although they might not always agree with their views, it was certainly advisable to keep on good terms with the surveyors to the local authority.

The form of building agreement given in the Paper was a good one, but one found that builders sometimes asked: "How much is that agreement going to cost?" No doubt Mr. Done had a printed form, and being liberal, let them have it for a small sum.

The principle of letting land at such a rate that the builder, could make a fair profit was a very proper one, for they must always consider, when they let land to builders, that the latter must also get a profit out of it, and they should go on the principle of "live and let live."

Then as to the construction of roads, he agreed with the reader of the Paper that it was in the interests of the landowner that the roads should be well made up in the first instance; it was cheaper in the end and it stimulated the sale of plots, as the lessees felt that when the time came for the local authority to take over the roads the apportionment would be a light one.

The working of the Finance Act in development cases was most difficult and complicated. No doubt it was a popular cry that everybody made a profit out of building land, but he agreed with Mr. Done that much money was lost over building land, and where a profit was made that profit was often very small. There was great speculation in dealing with building land, and sufficient allowance was not made to meet

those losses. The Act assumed that an exceptional profit was consistently made on building land, whereas they in practice knew that was not the case, but merely a reasonable return for the time and money expended in the development of the land.

He had much pleasure in proposing a hearty vote of thanks to Mr. Done for his Paper.

Mr. HAROLD E. MOORE (Fellow) in seconding the vote of thanks, said he felt that, with so complete a Paper before them, it was very difficult to find any fresh ideas or suggestions to add to its value. The first point he would mention was with regard to the leasing of sites for religious purposes, which had been already referred to by the previous speaker. He thought difficulty would be experienced in leasing a site, at least for the purpose of an Episcopal Church, as in one case in which he was concerned the bishop declined to consecrate the building until the site was converted into a freehold.

As to the chief or perpetual rent system of dealing with building land in the north of England as compared with freehold or leasehold usually found in the south, he would suggest that it would be desirable in many cases to extend the perpetual rent system in the south. It gave many of the advantages of the leasehold system with freedom from some of the objections to that form of tenure. The reasons urged by many that houses were not so well built on land held on leasehold tenure as they would be if the builder held a freehold title, was doubtless largely sentimental, and the majority would agree that the view given in the Paper as to the superiority

of houses on estates entirely leasehold was in accordance with the experience of most surveyors.

In dealing with a large block in the hands of a corporate body who had no capital for development, Mr. Done had pointed out one system adopted was to lease large blocks to speculators at increasing rents. He would suggest that in dealing with estates under these conditions at the present time it was very difficult, in the existing state of legislation, to get speculators to take land on that block system, commencing at a grass rent and going up to £400 or £500 a year. He had met the objection of speculators becoming liable to pay these heavy rents with doubtful results by arranging that the rental under the lease should be only the grass rent with an extra rent of £1 on every house erected on that land. He thought this arrangement was reasonable for the freeholder, while the speculator did not suffer from the heavy increase of rent if for any reason the development was not so rapid as expected.

An estimate was given in the Paper of £300 an acre as the cost of making roads. Of course that was amply sufficient in some cases, but in many cases it would be found rather an insufficient allowance, bearing in mind that a great proportion of roads necessary for developing land could not be made available building frontage.

Mr. Done did not quite see why there was an objection to dead ends. It seemed to him that these should be always avoided as rendering intercommunication probably difficult in the future. He was at present concerned with an estate in a northern town where intercommunication was needed, and it was found necessary to open up many of the dead ends. It was now difficult to settle the proper basis on which to

apportion the cost of the roads necessary for this purpose between the public authorities and the various owners who might be considered to benefit by them.

Perhaps the most important observation in the Paper was the remark in regard to valuations of building land. Mr. Done pointed out that in his experience land was overvalued. In one case lately he had much the same experience. This was in regard to 20 acres at a seaside resort valued at over £18,000 about four years ago. Since then only a single site had been taken up. When he had now to consider the value of this land for the mortgagees in possession, only three or four acres seemed likely to be wanted for building in the immediate future, having regard to the small growth in the district. Even this area could not be considered of larger acreage value than was placed upon the whole at the time of the original valuation. Having regard to existing taxation, building development must be retarded, and he felt that great caution should now be exercised by all surveyors in valuing undeveloped areas, and in estimating the time they would occupy in development and realisation.

Mr. PERCIVAL FOX TUCKETT (Fellow) said he would like to add his word of thanks to Mr. Done for his most excellent Paper. He felt sure they would all profit by it, and to the younger Members of The Institution, who had not had much practical experience in the development of building estates, it would prove invaluable. He so heartily agreed with all Mr. Done said that there were very few points upon which he could offer any criticism, and his chief object in speaking that evening was to emphasise some of the truths contained in the Paper.

In the first place he wished to emphasise with all the power he possessed the undoubted fact that as a general rule the larger the estate the better and more liberal was the development, and that the best estates had nearly all been developed by private individuals. Syndicates and companies were usually too anxious to get the last penny out of the land, but in the case of large estates belonging to private persons this was not so.

In the next place the leasehold system was the best, not only for the district but for the leaseholders and occupiers, owing to the protection afforded to all, individually and collectively, by the control of the ground landlord. When the freehold was sold, for all practical purposes the control was gone, and he personally thought it was a matter of great regret that in recent years such a very strong prejudice had arisen against this most excellent tenure. He attributed this result very largely to the growing practice of allowing builders unduly to inflate the natural ground rent. The consequence of this was that leasehold interests became unmarketable, and mortgages could not be raised upon them owing to the heavy liability due in respect of ground rents. Builders should make their profit out of the leasehold interest and not out of inflated ground rents.

While the boom in ground rents and in suburban houses generally was in full swing the fact that this method was founded on an unsound basis was overlooked, but economic principles had a way of asserting themselves in the long run, as builders and investors had found to their cost in recent years. But whatever the causes may be, there was no denying the fact that, except in a few very favoured positions, it was now practically impossible to let suburban land on building

leases unless the owner was prepared to finance the builder with all the consequent risks.

Another favourable feature about the leasehold system was that it controlled, and to some extent retarded, the development of a district. If a district were developed too rapidly the results were disastrous to that district, and he thought West Ham was a striking instance of the trouble resulting from too rapid development.

Mr. Done raised a doubt whether ideal towns such as Garden Cities were really so superior to those which had developed on spontaneous lines, and he (the speaker) was inclined to agree. No doubt the original idea was most laudable, but he doubted whether in practice the result would prove so very superior. He was afraid in years to come the usual defects would be found to exist, and certainly it appeared to him that in the numerous cases of Garden Cities which were springing up, the chief objects of the promoters were to avoid a considerable portion of expense which on an ordinary estate the freeholder would have to incur, and by the advertisement obtained from the name to obtain a somewhat higher price for the land than would otherwise be given.

The question of sites for places of worship was often a difficult problem, and he thought, on the whole, in the case of the leading denominations, it was better to sell the freehold with restrictive covenants as to user.

He doubted in view of the trend of legislation whether it was wise to grant 999-years leases, and he suggested that fee farm or perpetual rents were better, these being held to be rent-charges and not ground rents so that the owner would be more likely to escape taxation in respect thereof.

Mr. Done stated that in developing an estate the first thing to be done was to have an accurate map on a large scale. He (the speaker) would like to point out that if the estate were of any considerable size such a map was unwieldy and would also in course of time become inaccurate and worn. He therefore suggested that the better way was to obtain an Ordnance map and lay out thereon the general scheme of development of the whole estate. This done an accurate survey should be made of the portion to be actually dealt with and laid down on a large scale, with the roads, &c., shown thereon in accordance with the main scheme. When this portion had been developed, then another survey of a further portion should be made on a similar scale with the roads shown thereon, always keeping in accord with the main scheme, and so on until the whole estate had been developed.

With regard to the building agreement, owing to the shortness of time he had only been able to glance through the model given at the end of the Paper, but he thought that the following provisions should always be kept in mind by a surveyor when letting building land :—

1. The plan on the building agreement should be a block plan only, the frontage being figured, and generally speaking the other boundaries as well, unless the scale were sufficient for the purpose. The building line should also be shown.

2. The apportionment of the ground rent should be left to the surveyor to the freeholder, and he would suggest that it was desirable that the ground rents of the front houses should be slightly improved, just sufficient to prevent any loss on the remaining land in the event of the builder being unable to complete the agreement. Inflated ground rents should not be allowed.

3. The builder should submit plans to the freeholder's surveyor for approval; the latter could then protect his clients against any acquisition of light or other rights over the adjoining land. Except in the case of large houses a specification was unnecessary, as the general clause about building with proper materials would be sufficient protection.

4. In no case should a lease of the land be granted until the houses had been erected nor should a builder have any right to sublet or assign his agreement.

Except for short lengths he considered *culs-de-sac* were undesirable, especially in the case of very small property, owing to the difficulty of proper police supervision, and the same remark applied to narrow passages.

Mr. H. FREYBERG (Fellow) said time was getting short, and as they had heard so much of interest from the distinguished proposer and seconder of the vote of thanks, he felt there remained very little more to be said on the subject.

There was one matter, however, in Mr. Done's opening remarks anent the legislation we had been blessed with or suffered from during the last few years to which he would like to call attention.

He thought one benefit had been obtained from such recent legislation, namely, that at all events it had caused them, if not to cry "halt," at least to "mark time," and really to that extent that had been an advantage and a help to them in their profession. He did not suggest that the legislation was conceived with that idea in view, but still it showed that a benefit often accrued when least expected, and advantage should be taken of it.

As to the future development of land, he would like to point out that every class had now developed much larger and better ideas as to their interests and comfort generally and as to the amenities of their surroundings. He thought they would all agree that in some parts of the suburbs the present system of crowding as many people as possible on to the acre would have to be stopped for the future, or else a good deal of pulling down with rebuilding and replanning would have to be resorted to, Acton, parts of Ealing, and Hanwell had certainly not been improved by recent land development.

He agreed with the gentleman who seconded the vote of thanks, that no doubt land had for some time past been bolstered up to very much more than its real value, and that even a fictitious value had been attained.

He was professionally employed more often in purchasing sites than in land development, and therefore when he said the price was high they would understand that his was quite an unprejudiced opinion.

He would say a word as to the difficulty often arising in draining into sewers, to which Mr. Done had alluded. He had a striking example of that in Sussex, where the local board laid a 9-inch sewer some 5 feet below the surface of a country road, where on the north side the land rose to 6 or 7 feet above the road level, while on the south the land he had to deal with sloped rapidly down some 16 feet or so, making it difficult to lay the house drain, that was 150 feet away from the road, into the sewer, the invert of which was 6 feet above the highest end of the domestic drain. The surveyor agreed with his view, and recommended his council to lower the whole sewer to the required depth on the applicant defraying one-sixth of the cost, but the board resembled

the typical Scotch member and would say naught, do naught, and spend naught.

In the end he, the speaker, took the levels and designed a scheme for "stepping" the sewer for a length of some 85 feet between two newly constructed manholes, by which means the gradient of the sewer was, although considerably reduced, kept to a fall of 1 in 160 feet, while a fall of 1 in 40 was secured for the house drain, so the difficulty of the shallow sewer was overcome, but at an expense to the client of £85, which was a high price for a new sewer entry even in these days of expensive wood paving.

He would like to say, in conclusion, how much he appreciated the Paper he had heard, and also the valuable criticisms thereon to which he had listened with so much pleasure.

Mr. H. LOVEGROVE (Fellow) said, with regard to places of worship, they could not get a Church of England consecrated unless it were a freehold estate and free from mortgage. A bishop would not consecrate a church if there were a mortgage on it. He knew a case where certain members of the congregation had to band themselves together and release the mortgage before the bishop would consecrate the building. No such rule applied to chapels, for he knew of two cases which had ended in their being converted into cinematograph shows, the buildings not being consecrated.

He personally favoured the security of the leasehold system, as he knew of many cases where the practice of selling the plots outright had ended unfortunately. It was to no one's interest to look after the property, and the houses built were frequently instances of the worst form of jerry building.

A great number of leasehold ground rents had been put on the market since recent legislation, and sold at very low prices. A bad case came under his notice some time ago. An ordinary tradesman bought a leasehold ground rent, and the tenant beneath him, to use a familiar phrase, *sloped*! He (Mr. Lovegrove) condemned the building, it was pulled down, and the unfortunate man who had purchased the ground rent for the sake of some £5 a year, had to pay for the rebuilding!

Mr. ALAN PAULL (Fellow) said he was not a land developer; but he was very pleased to be present and hear the Paper.

He was rather interested in the figures and in the examples given under the Finance Act. There was one point he would like to ask a question upon, and that was how Mr. Done arrived at the amount of £37,000 for interest paid to the bankers? He knew the amount was supposed to be spread over the 26 years, but he imagined that the whole of the £55,000 was not spent in one year, and therefore he was rather at a loss to understand how the total interest of £37,000 was calculated.

Mr. Done, in his Paper, used (and he believed advisedly) the word "chapels" in connection with religious bodies. He did not mention the Established Church. The instances they had had brought forward that evening cited the Established Church, which was on an entirely different footing to the other places of worship referred to. The author of the Paper, as they all knew, was one of the best known land developers in the north of London, and he should therefore like to hear his opinion as to the laying out

of the Hampstead Gardens Estate and the Garden Estate at Ruislip.

Mr. W. J. REES (Fellow), as coming from the far West, desired to say a word in support of the vote of thanks to Mr. Done for his valuable Paper. He agreed with the last speaker that the word "chapels" was used advisedly, for it could not apply to the Church of England, and knowing what chapels were in Wales, they would not be surprised at the remarks Mr. Done had made. He expected before long that a Bill would be passed by which all chapels would be enfranchised, and he hoped on better lines than in the Finance Act of 1909-10, for he thought that that measure had stopped all leasehold enfranchisement for some time to come, for the heavy reversion duty was not likely to induce the lessor to sell his ground rent. He was speaking of cases where the ground rent was low and the rack-rent was £50 or £60 a year.

The valuations given in the Paper might with advantage be sent to Mr. Lloyd George for his consideration, as they contained points that he might well consider and adjust in the interest of the small leaseholder.

He had never before heard of damp courses in garden walls being suggested. No doubt damp courses were good in all cases, but in garden walls it would be throwing rather too much expense on small properties.

The suggestion that where possible the streets should run north and south so that each house should get the sun either in the morning or afternoon was valuable, and should be borne in mind by all surveyors in

developing estates, as sufficient attention was seldom paid to the direction of streets to be laid out, the chief element being gradients and number of houses.

The question of lights might easily be settled by inserting a few words in the lease saying that the lessee should have no right to lights over his adjoining neighbour's property.

The discussion on *culs-de-sac* reminded him very much of the case of a coal merchant who took a holiday in France, and after his return home he thought he was a bit of a Frenchman. A lady customer called upon him and said: "What is the price of your coal to-day?" "Well," he said, "if you take it *a la carte* it is 20s. a ton; " but if you have it *cul-de-sac* it is a shilling more for " the bags."

There were several other points in the Paper of much interest which he would have liked to touch upon, but at that late hour he would consider the personal interests of his hearers by brevity, and would therefore conclude with a cordial support of the proposition.

Mr. A. VIRGO BUCKLAND (Fellow) desired to know if it would be possible to adjourn the discussion to another evening, as the Paper was of such interest to all land surveyors that it was important it should receive much greater consideration than they could give it that night.

The PRESIDENT replied that there would be no further opportunity of discussing it during the present Session.

Mr. BUCKLAND (continuing) said he had found in dealing with estates that the minimum profit a builder expected to make was about 50 per cent. on the land, and he doubted if, were it anything much below that, the builder would get anything out of it.

He had not time to go through Mr. Done's building agreement, but he considered that it was important that no residue lease of land should be granted until houses were erected. On an estate in which he was concerned there were several residue leases at £2, containing an acre or more in each lease. These leases were acquired by a speculative builder who erected such bad houses that an action had to be brought against him. This was a costly matter, but fortunately the owners were people of wealth, and were able to get rid of him. Had they not been, the value of the surrounding houses would have been reduced in value about 50 per cent.

To obviate any difficulty in residue leases not being granted until houses were erected he had provided in a building agreement that after the ultimate ground rent had been secured the lessor would grant residue leases at £2 ground rents of any further houses erected, and would purchase such ground rents at 24 years' purchase, retaining control of the houses built and avoiding having to grant leases of uncovered land.

He agreed with previous speakers that the effect of recent legislation would probably cause leasehold estates to remain undeveloped for some years. He had recently let seven acres of land to a builder, whom he had tempted to take the land by saying, "The ground rent is so much ; you can buy the ground rent on each house erected at 24 years' purchase, or as each house is leased

“ we will buy an improved ground rent at 20 years’ purchase, and as soon as the whole ground rent has been secured we will convey to you the freehold of the balance of the land for a nominal sum.” The prospect of getting the freehold of a useful area of land enabled the builder to obtain financial assistance from his bankers without difficulty, and he was getting on well.

In a development at Colchester, where no builder would take land on a building lease but only buy freehold, he stipulated that the builder should pay 10 per cent. deposit. The plans were then approved, and until the buildings were erected in accordance with the plans the purchase was not completed, and the builder did not get his freehold.

He desired to thank Mr. Done for his most excellent Paper.

Mr. EDMUND HOWARD (Professional Associate) said he desired to add a few remarks on certain points that had not been touched on in the discussion.

First, as to the conveyances. He always considered a free conveyance a delusion and a snare. A solicitor to a mortgagee would always go into title, and then the free conveyance was practically useless. He had recently been charged for a client £3 15s. 6d. for a copy of an abstract of title, and the other costs mounted up in proportion.

He thought, perhaps, surveyors in the past had been in too great haste to build their roads, for there were to be seen in certain parts of London yards and yards of roads practically covered in grass and not being developed, as there was no demand for houses in the

district. It had been his duty to lay out a good many roads, and he had found in practice that it was best first to construct the sewers and then estimate how many houses could be built in a year, only laying down the hard core for that number of houses, and finishing the road when some were completed. If, say, 20 plots on either side of the road could be built in one year, he approached the gas, water, electric, and telephone companies, and tried to get them to lay their different mains for that distance at once. In some cases the drain connections to the proposed houses had been put in so that when the final coat of metal had been laid it was not again disturbed.

Mr. Done had submitted an interesting example of the workings of Increment Value Duty under the Finance Act. His details, however, were scarcely sufficient to enable one to discuss the transaction fully. Was the £40,000 actually expended, or was it the value attributable to a smaller sum expended on sea walls, roads, &c. If the sum expended were smaller, and the value attributable was the £40,000, it was hardly fair to say that Increment Value Duty would have to be paid on no profit. The profit would be the difference between £40,000 and the amount expended less the duty paid. If, however, £40,000 were spent, he thought it could be contended that, as this sum was spent on improvements, the "value attributable" mentioned in the Act plus the cost of the estate would be the value at which the estate was ultimately disposed of, and therefore no increment would be payable.

Clause 14 of the Building Agreement dealt with the granting of a lease to a builder or his nominee, and he

would ask whether Mr. Done had considered this in connection with the Finance Act, 1909-10. After recently discussing the point, whether "a nominee" should be included, with the firm of solicitors acting for large suburban freeholders in London the matter had been left open for further consideration. Under the Act the lessor or freeholder was made liable for the Increment Value Duty payable on the granting of a lease. The building agreement was not recognised as an occasion under the Act, but the builder might dispose of some plots to another builder, and when the lease was granted to a purchaser both builders would drop out of the transaction. There might be Increment Duty which ought fairly to be paid by either or both of those builders, but the lessor would have to pay. It would be perhaps difficult, owing to the delay in getting occasions settled—builders being a nomadic class—to obtain the amount from them, but if the lease were granted to the builder and then assigned to the purchaser this would to an extent be obviated. The delay in getting occasions settled with Somerset House or even obtaining news of the occasions after the leases had been stamped was another injustice to the lessor because he could not close his accounts until each case had been settled. In one district alone over 100 leases from his office had been stamped since the Act came into force a year ago, but there was no likelihood of getting the occasions settled for a long time yet, as nothing had been heard about them from Somerset House up to the present.

Mr. Done's Paper was full of useful points, but

although he would like to take up many others, time would not allow him to do so.

The President then put the vote of thanks to the Meeting, which was carried unanimously.

On the motion of Mr. W T. CRESWELL, seconded by Mr. C. H. BEDELLS, the Meeting was adjourned until next session or some other convenient date.

THE LIVERPOOL VISIT.

AT

THE ORDINARY GENERAL MEETING,

Held in Liverpool on Thursday, 25th May, 1911.

The Members visiting Liverpool were received in the Council Chamber of the Town Hall by the Lord Mayor (Councillor S. M. HUTCHINSON, J.P.), who said it gave him great pleasure as chief magistrate of that city to welcome the Members of The Surveyors' Institution, and he trusted that their visit would be both pleasurable and instructive. As many of them knew, Liverpool could claim to be an ancient city, its first charter having been granted by King John in the year 1217. They had numerous charters, and the last of these was granted in 1880. Their population in 1700 was only 5,700, and for some 500 years there was very little increase. In 1881, however, the population had risen to 77,000, and at the present time they estimated that they were 770,000 within the municipal boundaries. The area of the city in 1835 was 1,860 acres, and now it was 16,691 acres with a rateable value of £4,670,000.

Might he be allowed to say that from a surveyor's

and engineer's point of view the city of which they were so proud must be very interesting. Their citizens had always been in the van as regards sanitation and such matters as the housing of the very poor and the thousand and one matters that were connected with the comfort and the prosperity of the inhabitants, and quite recently they had constructed a number of new roads on the outskirts of the city which formed an interesting object-lesson in town planning. Last, but not least, they had their docks, which Members of The Institution would find well worthy of a visit. They, as citizens of Liverpool, claimed that their docks were the finest in the world, and he was pleased to observe that a trip on the Mersey to view the docks and shipping was one of the items on their programme for that afternoon.

The city of Liverpool, like other towns and cities of the Empire, owed a great deal to the surveyors' profession. They did not obtrude themselves upon the public notice, but those who had some knowledge of municipal affairs did know and did feel that they owed to that profession a deep debt of gratitude. A great deal of the surveyor's work was not seen, but although people in those busy days of rush did not go out of their way to make inquiries and took a lot of things for granted, yet they knew that the health and convenience of the great centres of population would be very different from what they were but for the work done by the town officials and other gentlemen in their profession.

In conclusion he wished The Institution a very pleasant and instructive meeting, and thanked them for their kind invitation to dine with them that evening.

He would no longer stand between them and the conduct of their business, but would ask their President to forthwith take the chair.

The PRESIDENT, in taking the chair, thanked the Lord Mayor for the kind manner in which he had received them and also for the loan of that chamber for their meeting, and for the fine show of old city plate which had been laid out at the back of the hall for their inspection. He was quite certain that Members of The Institution would find a great deal to interest them in that city both from an artistic and instructive point of view.

FIRST PAPER.

THE MERSEY DOCK ESTATE.

BY OSWALD W. YOUNG (FELLOW).

Preface.

I think I ought to preface my remarks by saying that, though the title of my Paper might lead one to believe that a history of this great estate was about to be given, I do not purpose doing more, in the short space of time allotted to me this morning, than to refer to certain incidents in its history that may be of interest to the surveyor rather than to the engineer or the archæologist.

Boundaries of
the Estate.

"The Mersey Dock Estate," or as it is more familiarly known, the "Liverpool Dock Estate," consists of two distinct and separate properties, divided, as you see on the cartoon, by the River Mersey. On the east side of the river are the Liverpool Docks proper, and on the west side the Birkenhead Docks; the whole estate being thus situate in two counties, Lancashire and Cheshire, and in the county boroughs of Liverpool and Bootle, and the urban district of Waterloo-with-Seaforth on the Lancashire side, and in the county borough of Birkenhead, and the newly constituted borough of Wallasey on the Cheshire side. These are again divided into seven townships or parishes, viz., Seaforth, Bootle, Kirkdale, Liverpool, and Toxteth Park on the Lancashire side, and Birkenhead and Poulton-cum-Seacombe on the Cheshire side.

The estate covers an area of about 2,350 acres, viz., about 1,642 acres in Lancashire and 708 acres in Cheshire. It has a river frontage on the east side of the Mersey of eight miles, extending from its northern extremity at St. George's Road, in the district of Waterloo, to its southern boundary at Jericho Farm, in the township of Toxteth Park, but this, as you will see, includes undeveloped lands. The length of the Docks proper, as defined by the river walls already constructed, measured from the Seaforth Battery at the north end to the continuation of Dingle Lane at the south end, is nearly six miles.

Under an Act passed in the seventh year of the reign of Queen Anne, known as 8 Anne, cap. 9, the Corporation were appointed the trustees for building the first dock and for managing it. In 1825 a Committee, under the title of "The Committee for the Affairs of the Estate of the Trustees of the Liverpool Docks," commonly termed "The Dock Committee," was set up, composed of thirteen members of the Town Council and eight members from the merchants or shipowners, but with power to the Town Council as Dock Trustees to annul, by veto, the proceedings of the Committee.

The original
Dock
Authority of
Liverpool.

As regards the Cheshire Docks a body designated the "Birkenhead Dock Trustees" obtained an Act in 1844 to construct docks there, and in the following year a company called the "Birkenhead Dock Company" were also empowered to construct docks adjoining those of the Trustees, and, although a commencement of these works was made, sufficient funds were not forthcoming to complete them, and ultimately an agreement was come to in 1855 between those two bodies and the Corporation of Liverpool, confirmed by the Birkenhead Docks Act of that year, whereby the whole of the

The original
Dock
Authorities of
Birkenhead.

Birkenhead estate was transferred to the latter body. Two years later no less than five Bills concerning the Liverpool and Birkenhead Docks were presented to Parliament, and the Board of Trade, in reporting on these Bills, remarked that "It is clear that there is no body which, fairly representing the trade of the Mersey, possesses all the powers necessary for the maintenance and management of the harbour and its works. It is also clear that the Corporation of Liverpool has a preponderating influence, and that that body, though undoubtedly interested in the trade of the port, has had, and to a great extent still has, in the application of the town dues to borough purposes, in the sale of land to the Dock Trust, and in the suppression or control of Birkenhead, interests directly opposed to the interests of the commerce of the Mersey and of the trade of the country."

The Mersey
Docks and
Harbour
Board.

The outcome of these Bills was the passing of the Dock Act of 1857, constituting the present Dock Board, under the title of the "Mersey Docks and Harbour Board," the Authority of the Port of Liverpool, and vesting in them the whole of the three Dock Undertakings.

Mersey
Conservancy
Commis-
sioners.

This Board consists of 28 members, 24 of whom are appointed by the shipowners and others paying dock dues, and the remaining four by the Commissioners for the Conservancy of the River Mersey, a body composed of the First Lord of the Admiralty, the Chancellor of the Duchy of Lancaster, and the President of the Board of Trade.

Corporation
Control.

Thus it will be seen that, for the first time in the history of the Docks, they were entirely freed from any control of the Corporation.

This Board exists as a trust for the sole purpose of

managing and conducting the affairs of the estate, without profit to themselves and for the benefit of the port.

The members of the Dock Board, who are gentlemen of the highest standing and integrity (the present chairman being Mr. Helenus R. Robertson) give their services gratuitously, though actively engaged in the pursuit of their own businesses, and in the direction of the affairs of many important companies.

Politics have no place in the proceedings of the Board, nor in the selection of the candidates for election. Politics.

It may be here mentioned that the new Port of London Authority, which has recently been set up by Act of Parliament, has been modelled on the lines of the Mersey Dock Board, a compliment of which Liverpoolians are justly proud. Port of
London
Authority.

Having described the boundaries of the Dock Estate and introduced you to the personnel of those entrusted with its government, I now come to what is of more interest to the surveyor, viz., the acquisition of the property. Acquisition of
the Property.

You will see from the cartoon how the Liverpool Docks appear to jut out into the river. This is due to the fact that they are practically all constructed on the foreshore reclaimed from the Mersey.

Liverpool enjoys the honour of having built the first dock ever constructed in England. It was opened in 1715 and closed after being in use 111 years, the site being now occupied by the Custom House, &c. Earliest
Docks.

The sites for the earliest docks, most of which were constructed between 1715 and 1788, and known as the "Old Dock," the "Dry Dock" (now the Canning Dock), the "Salthouse Dock," the "George's Dock and Basin," the "Old King's Dock," and the late Queen's "Half-Tide

Dock," were given to the Dock Trustees by the Corporation as free grants, the area being about 39 acres.

The subsequent acquisitions of land from the Corporation were paid for by the Dock Committee, in some cases at the price which it had cost the Corporation to acquire them, and in others at the amount fixed by a jury, while some sales were settled by agreement.

I do not propose to take you through all these sales, some of which were made more than a hundred years ago, but it may interest you to note the price for some of the foreshore lands.

Early Sales by
the Corpora-
tion.

Some of the early sales of foreshore for which the Corporation required payment from the Dock Trustees took place in the years 1806 to 1819, and comprised the site of the Prince's Dock, its Half-Tide Dock, and the old Fort, about 38 acres, the price being about £2,750 per acre.

The year 1826 saw the completion of several large purchases by the Dock Committee from the Corporation under the Act 6 Geo. IV. c. 187, perhaps the most noteworthy being the piece of land and strand northward of the Prince's Dock Basin containing some 56 acres. The sale was an interesting one from the surveyor's point of view, inasmuch as the price paid (£110,000) was fixed by a jury, and worked out at about £1,900 per acre.

Two important additions were made to the estate in 1847 when the Dock Committee acquired by agreement from the Corporation under the authority of the Act of 7 & 8 Vict. c. 80, a site for the group of docks known as the Salisbury, Collingwood, Nelson, Bramley-Moore, and Wellington Docks, containing an area of 71½ acres, the price being over a quarter of a million, equal to, say, £3,500 per acre, and a further site of, say, 116 acres

for about £150 per acre, as the site of the Sandon and Huskisson Docks. This latter price was for foreshore only, whereas the former included buildings in addition.

These few instances are perhaps sufficient to show the prices at which the Corporation sold the foreshores to the Dock Committee, and there is little wonder that much dissatisfaction, as we are told, was felt by traders and others interested in the Docks at these sales. Certainly, comparing them with the subsequent purchases made by the Mersey Dock Board, the complaints do not appear to be unreasonable, for although the Board have added several hundreds of acres of foreshore to the estate, in no case have they paid more than £400 an acre for the same.

Comparison
of Prices.

The late President of our Institution, when delivering his opening address, divided land into two classes, viz., "food land" and "dwelling land," and he very properly excluded foreshore land, for the same reason, I imagine, that he omitted deer forests, because, as he said, it seldom comes under the practical consideration of our Members.

I am sure you gentlemen who have had to deal with the acquisition of foreshores have experienced considerable difficulty in determining their value. Depth of water, depth of land, sheltered access, railway facilities, competition, are all elements for consideration in determining the value, and for these reasons prices at which foreshore lands have previously exchanged hands often prove most misleading.

Difficulty in
determining
Foreshore
Values.

A further difficulty arises from the fact that in most cases the foreshore is either the property of the Crown or of the lord of the manor, and the price at which that class of owner will sell is largely dependent upon how

Undeveloped
Foreshores.

far the project for which the land is required is likely to benefit or to affect prejudicially his suzerainty.

Large tracts of the foreshore acquired by the Board still remain undeveloped. The two pieces you see at the extreme south and north ends of the estate are of this class, as is also a portion of the foreshore at Tranmere, acquired from Major Orred. Though at present unproductive I think it is generally acknowledged that the Board exercised commendable foresight in the acquisition of these lands, as they have thereby effectually secured for the Trust the supremacy of the Mersey and left no opening for the establishment of rival docks.

Such competition is not imaginary, for more than once have Bills been promoted for the construction of Docks on the Mersey, the last occasion being in 1892, when two independent schemes were submitted to Parliament.

But the possession of these foreshores brings with it much anxious concern to the owner, who has to protect his property from numerous intruders, such as bathers, fishermen, loafers who come to play cards and to bet, builders who come for sand, parties who come to break up wrecks, &c., political and religious gatherings, &c. This trouble largely arises, I think, from the popular error that the public have a common-law right to use the foreshore and to pass thereon for the purpose of sea-bathing. That no such right exists was established as far back as the year 1821 by the King's Bench Judgment in the case of *Blundell v. Caterall*, the decision being affirmed by the Court of Appeal in 1904 by the case of *Brinckman v. Maltley*, and lastly in 1903 by Mr. Justice Parker in the well-known Chancery action of *Lord Fitzhardinge v. Purcell*.

Birkenhead
Estate.

Coming now to the Birkenhead Dock Estate, on the

Cheshire side of the river, we have already seen that two rival bodies, viz., the Birkenhead Dock Trustees and the Birkenhead Dock Company, were the original promoters of the Docks there, though the Liverpool Corporation had, as far back as 1824, purchased large tracts of land in order to prevent the establishment of a rival port.

The undertaking of the Birkenhead Dock Trustees embraced the whole of the bed of what was formerly known as Wallasey Pool, which they acquired as a free grant from the Crown. These Trustees became insolvent before the completion of the works which they were authorised to construct, and the whole property was transferred to the Liverpool Corporation for a sum of £391,463.

Birkenhead
Dock Trustees

The property held by the Birkenhead Dock Company practically comprised the whole of the property on the south side of the Great Float. The freehold belonged to the Corporation, who acquired it in 1828 for about £800 per acre, and subsequently leased it to the Company who, however, like the Birkenhead Dock Trustees, were unable to complete their works, and the Corporation cancelled the lease and took over the property, including the Herculaneum Estate, on the payment to the Company of a sum of about three-quarters of a million (£751,537).

Birkenhead
Dock
Company.

The only other purchase in the vicinity of these Docks which need be noticed is the piece of foreshore, now occupied by the "North Reserve," containing about 60 acres. This was originally acquired in 1852 by a Mr. John Abel Smith from the Commissioners of Woods and Forests for £60,000. It is difficult to understand why such a high price as £1,000 per acre was put on this foreshore by the Crown, whilst, as we have seen, no

The North
Reserve.

charge was made to the Birkenhead Dock Trustees for the whole of the bed of the Great Float. Possibly it was considered that the Trustees were acting in a semi-public capacity, and should therefore be assisted, whilst in the former case the purchaser was a private individual.

Birkenhead
Estate Debt.

Be this as it may, the result of all these high-priced sales at Birkenhead was to impose on the present owners (the Mersey Dock Board), when they took over the property in its then incomplete state under the Dock Act of 1857, an immediate burden of £1,143,000. Added to this Parliament made it a condition of the transfer that the new Board should complete the building of these Docks, an obligation which cost them some £6,000,000.

Dock Board
Purchases.

I now come to some of the more recent sales and purchases which were effected after the establishment of the present Dock Board. Time will not allow me to do more than briefly to refer to the more important of them.

Old Tobacco
Warehouse
Property.

In 1876 the Board acquired from the Corporation, by arbitration under the Mersey Dock Act of 1875, the property comprising the old Tobacco Warehouse at the King's Dock, the River Craft Dock Estate, and some shipbuilding yards adjoining, containing in the whole about 22 acres. It was the last remaining piece on the Dock Estate belonging to the Corporation, and was fully occupied.

The Umpire was Mr. George Pownall, and the Arbitrator for the Corporation Mr. C. E. Cawley, the then member of Parliament for Salford, and for the Dock Board our honoured friend the late Mr. Elias Pitts Squarey.

The Counsel engaged in the case all became cele-

brated men. Mr. Hawkins and Mr. Gully, who acted for the Corporation, were subsequently both raised to the Peerage; the one as Lord Brampton (more familiarly known as Judge Hawkins), and the other, the late Speaker of the House of Commons, as Lord Selby. Mr. Thesiger and Mr. Webster, who led for the Dock Board, became, respectively, Lord Thesiger (a Lord of Appeal) and Lord Alverstone, the present Lord Chief Justice of England.

The Arbitration was unsatisfactory from the surveyor's point of view, inasmuch as on the third day after the three valuers for the Corporation had given their evidence, a settlement was arrived at by the purchase price being agreed at £310,000, about £77,000 less than the Corporation's claim, and equal to about £2 17s. 9d. per square yard, or £14,000 per acre.

It has been said that the Dock Board never yet made a purchase of land which they had cause to regret, and so the acquisition of this property enabled them to convert the old King's Dock, with its then income from Dock rates of some £300 per acre into new Docks yielding £6,000 per acre from that source.

It is very seldom that the Board sell any of their property, but in 1895 the Corporation approached them with the view of their disposing of the site of the George's Dock, which, owing to its geographical position, had become almost incapable of being adapted to modern dock requirements and was then more than one hundred years old. After prolonged negotiations the "Liverpool Corporation Act of 1898" was passed, giving the Board power to sell and the Corporation power to buy the property. Scheduled to the Act is the agreement setting forth the terms of purchase. The total area was about eight acres, and of this the Board elected to

George's Dock
Arbitration.

retain for themselves some three acres, leaving the remaining five acres to be taken by the Corporation.

It was mutually agreed that Mr. Robert Vigers, who was then President of The Institution, should be appointed the Arbitrator, and the Proceedings opened in the Grand Jury Room of St. George's Hall on the 28th February, 1899. Those gentlemen, of whom I see several here, who were engaged in the case may perhaps remember the somewhat facetious remark with which the Arbitrator opened the Proceedings by saying that, as the Agreement of Purchase provided that, failing the parties agreeing, the Arbitrator should be nominated by the President for the time being of the Surveyors' Institution, he wished it to be understood that he had not nominated himself to the position, as might be inferred from the fact that he happened to be the President of the Institution for the year.

As it is now twelve years since that Arbitration took place, it may be of interest to look back and review the events which have since happened.

The Agreement of Purchase provided that the land should not be used for dock purposes, or for warehouses, or factories, so that the valuers had to confine themselves to the question of its value as a building site for offices, &c., and, indeed, that was the best use it could be put to.

It is a magnificent site, as you will see when you go down to the river this afternoon. Situate less than 300 yards from this council chamber, in the heart of the city, it is absolutely unrestricted as regards rights of light from adjoining owners.

The valuation of such a site presented many difficulties to the surveyor. An area of some five acres already excavated to a depth of 30 to 40 feet, by common consent to be used only for offices, &c., it was no wonder

Mr. Robert
Vigers,
Arbitrator.

Terms of
Purchase.

that the evidence disclosed a more than ordinary (and that is saying a good deal) divergence of opinion between the surveyors engaged on either side. Naturally the Dock Board (the vendors) came prepared to show that this great excavation was by no means so prejudicial as some might suppose, and our able engineer, Mr. Lyster, presented an excellent case to show that the foundation work could be brought up to the level of the basement floor for less than £2 per super. yard. His evidence was supported by that eminent engineer, Sir John Wolfe Barry. As a matter of fact, the cost of the foundation work of the new Dock Office, which was subsequently erected on a part of the site of the Dock, actually cost some 50s. per super. yard.

The total sum claimed by the Dock Board amounted to about £485,000, equal to, say, £20 per square yard. This was after making due allowance for the cost of forming the necessary roadways across the Dock and of bringing the foundations up to a normal basement level.

Dock Board's
Claim.

The surveyors for the Corporation presented their case in quite a different way. They valued the site as it stood, without any roads or foundation work, at some £147,000, or about £6 per square yard; but in order to rebut Mr. Lyster's evidence as to the cost of foundation work, &c., they put forward a witness who estimated it at about £105,000, leaving the net value of the site at some £42,000, so that the Board's estimate was more than eleven times as much as that of the Corporation's. This figure of £105,000 worked out at £5 8s. 11d. per square yard over the area dealt with.

Corporation's
Price.

As usual the surveyor was called upon to act the part of prophet, and to say in how many years the purchaser would get back his money. Both sides agreed

that the road and foundation works would take two years to make, but as regards the period which would elapse before all the building plots would be taken up, the valuers for the Dock Board estimated it at eight years as against four only at which the Corporation surveyors put it.

Unfortunately we are not able to check the accuracy of these conjectures, for although it is now, as I have already said, over twelve years since they were made, the purchasers never prepared the ground in the manner it was suggested they should do to make it eligible for building purposes, but left it just as they acquired it, viz., as a dock, except that they threw two roads across it.

Regarding these roads, I may mention that they have cost some £30,000, or about £4 per super. yard. They are 80 feet and 65 feet wide respectively, and I advise you to look at them before you leave the city.

Award.

The Arbitrator gave his award on the 10th of May, 1899, fixing the price at £305,224, or, say, £12 12s. a square yard, which I think you will agree was entirely favourable to the Board; but the actual amount paid came to about £11 8s. 6d. a yard, or about £55,000 per acre, as a deduction was agreed to be made in respect of certain matters in dispute between the Board and the Corporation.

The whole of the land has since been sold by the Corporation, the most northerly plot to the Royal Liver Friendly Society as a site for their new head offices, &c., and the remaining plot to Messrs. William Cubitt & Company, of London, in both cases at practically the same price as the Corporation paid for it, though when the cost of the roadways is added that price is much

exceeded, and the result has by no means been one for the Chancellor's "increment duty."

You will have an opportunity of seeing these new offices of the Royal Liver Society which have been built from the designs of Mr. W. Aubrey Thomas. The building is unique, at least in this city, not only because of its freedom from interference with lights and its great height, having ten storeys from the street level, but on account of its method of construction, being built of reinforced concrete, faced with granite, and although it has come in for a great deal of adverse criticism from our architectural brethren, one cannot but admire the boldness of its conception, and the wisdom of those who have made the most, at least from a financial point of view, let us hope, of such an eligible site.

Royal Liver
Society's New
Offices.

On the southern portion of the Dock the new head offices of the Dock Board have been constructed from the designs of Messrs. Briggs & Wolstenholme, Hobbs & Thornely, who were placed first by the assessor, the late Mr. Alfred Waterhouse, R.A., in a limited competition confined to Liverpool architects. As you are to visit the building this afternoon it is not necessary for me to describe it here, but it is a somewhat curious fact that in constructing it on the site of the old Dock, history seems to have repeated itself, for it was on the site of a dock that the previous Dock Office was constructed. You may wish to note that the cost of the building works out at thirteen pence and two-thirds of a penny per cube foot, which I think you will agree, is a remarkably low figure for such a fine structure.

New Dock
Offices.

The remaining portion of this old George's Dock, containing an area of about three-quarters of an acre, has recently been sold by the Dock Board to the

Site for Baths.

Liverpool Corporation at £5 per square yard for the erection thereon of salt-water baths, &c., but if any of you gentlemen care to look at the site when visiting the Docks to-day, you will see that it has no proper river frontage and is skirted by the overhead railway on its eastern side. It is, moreover, restricted as to its user, height of building, &c.

Duke's Dock
Arbitration.

Only a year following the George's Dock Arbitration came the purchase by the Board of the Duke's Dock property from the Manchester Ship Canal Company. This was a more important arbitration than even the one I have just referred to, as the purchase price was the largest amount ever paid by the Board for a single property since their constitution.

The same Arbitrator (Mr. Robert Vigers) was by mutual consent appointed, but, as there were many legal points involved, he was assisted, as legal assessor, by Mr. A. T. Lawrence, now a Judge of the High Court.

There was a great array of surveyors for the Company, no less than seven being called, who put the value at nearly three-quarters of a million, as against less than a quarter of a million at which the Dock Board's four surveyors estimated it.

Award.

The property which, as you will see from the cartoon, is situate immediately to the north of the new King's Docks, contains about $12\frac{1}{2}$ acres. The amount of the award was £522,000, equal to £8 12s. per square yard, as compared, remember, with £2 17s. 9d. per yard at which the Board purchased the adjoining property twenty-four years earlier, as I have already mentioned.

The Board were, I consider, greatly handicapped in these proceedings, inasmuch as, in addition to the fact that the property was situated only a few hundred yards from the George's Dock, where, twelve months

earlier the Board's surveyors were expatiating on the value of dock property, the Board had only two years previously obtained an Act authorising the expenditure of three and a half millions on dock improvements in the immediate neighbourhood and elsewhere. The arbitrator was, I think, further influenced by a statement made in the course of the proceedings that the same property was sold some twenty-eight years earlier for £400,000. If this were its true value then, he placed the increment value at $30\frac{1}{2}$ per cent.

It was the late Sir Edward Boyle who remarked that "the name of the Mersey Dock Board might almost be said to take the place of honour in the history of "the litigation of rating questions," and so I think that my Paper would be incomplete if I were not to mention some of the rating cases arising out of the occupation of the Board's Estate. Dock Rating.

Almost the first step of the Dock Board after their constitution in 1858 was to challenge the right of the overseers to levy poor rates on their property. They did so on the ground that it was held for public purposes, and that they were barred by their Acts from making a profit. The case, known as the *Mersey Docks v. Cameron (or Jones)*, was carried to the House of Lords, who gave their decision in 1865, laying down the principle that so long as a hereditament itself is of value, it is rateable, no matter what the purpose may be for which it is held, and that case has since become the leading one on the point. Mersey Docks
v. Cameron.

In 1872 the case of the *Board v. Liverpool Overseers* (L. R., 7 Q. B., 643) came before the Court, the question being whether the Liverpool and Birkenhead Docks were to be treated as one system, inasmuch as a vessel Board v.
Liverpool
Overseers.

paying dues was entitled to use any of the Docks in either parish. It was held that the Liverpool Docks were to be treated as distinct from the Birkenhead ones, and the earnings of each allocated to the particular township which the vessel entered. This decision affirmed the rule that the parochial principle must prevail wherever possible, and that the acreage principle must be only resorted to when it was impossible to adopt the other method.

Board v.
Birkenhead
Overseers.

In the following year came the case of the *Board v. The Birkenhead Overseers*. It was a case in which the Board contended that, as their Birkenhead Estate was then carried on at a loss, the rateable value should only be nominal, but the Court held that as it was admitted that certain portions of the estate, such as warehouses, &c., could be beneficially occupied apart from the Docks, such portions should be separately rated, and the assessment of the Docks *per se* struck out.

Mersey Docks
v. Liverpool.

In the same year a further case, *Mersey Docks v. Liverpool* (L. R., 9 Q. B., 84), was submitted to the Queen's Bench, in which it was contended by the overseers that because the Board were statute barred from making a profit they should not be allowed any deduction in respect of "Tenant's Profits." The Court held that if the premises were let it must be to a tenant subject to the provisions of the Dock Board's Acts which debarred the tenant from making a profit. A further question was raised as to whether the town dues were rateable, but as it was shown that they were of the nature of a toll in gross, and payable whether the goods were landed on the Board's estate or not, it was held that they were not rateable.

Allan v.
Liverpool
Overseers.

In 1874 came the oft-quoted case of *Allan v. Liverpool Overseers* (L. R., 9 Q. B., 180). In this case the Board

let certain dock sheds on the margin of the quay to Messrs. Allan Bros. & Co., the well known shipowners. The premises were held during the pleasure of the Board, and when the Company were not using them, the Board were entitled to let other shipowners use the premises. The question was whether the Board or the Company were the occupiers for rating purposes, and the Court held that the Board were the occupiers. A similar point was raised twenty years later in the case of the *Rochdale Canal Co. v. Brewster* (1894, 2 Q. B., 852), where the Board had absolutely demised to the Canal Company certain quay space for which the Company paid an annual rent, and undertook to pay all rates and taxes. It was held by the Court of Appeal that the Company were not in rateable occupation of the premises, Lord Justice Lopes remarking: "I have come to the conclusion "that there is such a predominating right of control "reserved to the Board, as to prevent the occupation "being so exclusive as to be rateable."

*Rochdale
Canal Co. v.
Brewster.*

A case which went through all the Courts and finally to the House of Lords was that of *Mersey Docks v. Birkenhead* (1901 A. C. 175), in which the assessment of the Board's Foreign Animals Wharf at Birkenhead was involved. The Board unsuccessfully contended for an assessment based on a percentage of the cost of constructing the premises, whilst the overseers sought to base it on the profits earned.

*Mersey Docks
v. Birkenhead.*

The Lord Chancellor (Lord Halsbury) in giving judgment, in which he declined to interfere with the decision of the Recorder, remarked that "The thing that "the legislature has called upon the overseers to do is to "solve a simple question of fact—the rent at which the "hereditament might be expected to let from year to "year—and they are to arrive at it, so far as I know,

“ unfettered by any statute as to the way in which they
“ shall do it.”

Rating of
Warehouses.

The rating of the Dock Warehouses has often been the subject of dispute. These warehouses are adjacent to the Docks and unlike some of the London Warehouses, situate at a distance therefrom. A question as to whether the rating should be based on the actual receipts and expenditure of the warehouses, or upon a fixed rate per superficial yard, like the ordinary “ up-town ” warehouses, was settled in our local Sessional Court in favour of the latter principle.

In this case the Company who rent the cellar floor of one of the Board's warehouses successfully appealed to Quarter Sessions, contending that they were not the rateable occupiers of the property, but the Court of King's Bench (January, 1911) reversed the decision and held that they were the occupiers.

The net rateable value of the Board's most up-to-date Docks is about £1,500 per acre, and of the poorest of the Docks about £250 per acre.

The total rateable value of the Dock Estate exceeds half a million, and the total amount of Poor and Local Rates paid thereon is approximately £134,000 per annum.

As you are to visit the Estate this afternoon I think I ought not to conclude my Paper without briefly mentioning one or two interesting items relating to the Port, sometimes called “ The Gateway of the West.”

Export Trade.

In her export trade Liverpool occupies the premier position among the ports of the United Kingdom.

The Landing
Stage.

The landing stage from which you are to embark on the river cruise this afternoon is, I believe, the largest

floating promenade in the world. It is nearly half a mile in length, viz., 2,478 feet, and 80 feet in width, and the whole structure, with its eight bridges which connect it with the shore, rises and falls with the tide. A floating roadway 550 feet long and 35 feet wide, by means of which an easy incline for goods traffic is maintained at all times of the tide, is also connected with it. Although surrounded by water, and therefore one would imagine, secure from the ravages of fire, it was nevertheless entirely destroyed by fire in 1874, a catastrophe which involved the Gas Company in a loss of some £80,000.

It may interest you to know that some of the fine Dock Sheds. double-storey sheds, 95 feet wide and 50 feet at least in height to the ridge of the roof, constructed of the best material and equipped with the most modern type of machinery and hydraulic cranes, have been constructed with all their foundations for about £5 10s. per superficial yard.

The new Tobacco Warehouse erected on a part of the site of the Stanley Dock is said to be the largest warehouse in the world. It is fourteen storeys high, including the basement, and has a total floor area of 36 acres capable of carrying a load of 100,000 tons. Its total storage capacity is 66,000 hogsheads. To those of you who are acquainted with our St. George's Hall, of which Liverpudlians are so proud, it may be of interest to you to know that that magnificent structure could easily be put inside the four corners of this huge warehouse. The contract for the building was £223,000, which works out at 3½*d.* per cube foot. Tobacco Warehouse.

As an illustration of the importance of the tobacco trade to Liverpool, which is the largest tobacco centre in the country, it may be mentioned that the stock of

tobacco in this warehouse in 1910 was about 65,000 casks, the value of which, duty paid, was about £13,000,000 ; the total quantity in all the Board's warehouses was about 122,000 casks, and the value, say, £25,000,000 sterling.

Foreign
Animals
Wharf.

The Board's Foreign Animals Wharf at Birkenhead, which covers an area of 20 acres, is another important asset ; I had nearly said *was*, for owing principally to the operations of the American monopolists the large foreign meat trade which was carried on there, has, to borrow the words of a recent writer, " been strangled, " and the premises, with an equipment sufficient to deal " with 2,000 head of cattle a day, are now derelict."

In 1897 the cattle landed there numbered over 280,000 oxen and 286,000 sheep, whilst during the first four months of last year only 25,000 oxen were landed, and no sheep.

Depth of Sills.

With the increase in the size of ships which has been yearly going on, it is found necessary to increase the depth of the dock sills, and at the new Gladstone Dock, which is now being built at Seaforth, the sill is to be placed at a depth of no less than 25 feet below datum, as compared with 5 feet (and even less) at which the sills of the old docks were placed.

Dredging the
Bar, &c.

The labours and vigilance of the Dock Board are not confined to the great system of Docks which you see on the cartoon, for, far removed from the busy centre of the city, viz., some 13 miles away in the Liverpool Bay, much valuable work is carried on in the lighting, buoying, and dredging of the sea channels. It was in the year 1890 that the Board took in hand the gigantic work of cutting a channel 1,000 feet wide through the bar at the entrance to the port. This channel is now maintained at a depth of 32 feet at low water. The work has been accomplished by the aid of powerful

dredgers, which in the process have removed over 45 million tons of material.

The latest of these dredgers, constructed at a cost of £150,000 is the "Leviathan," which is capable of dredging to a maximum depth of 70 feet, and is able to fill herself with 10,000 tons of sand in 50 minutes.

Another important work which has just been completed by the Board in this bay, is the construction of what is known as Taylor's Bank Revetment, consisting of a stone wall over two miles long, built on this sea bank to check its increasing concavity. Revetment.

I feel I have taken but scant notice of the great engineering works which have been carried out by those two eminent engineers, the late George Fosberry Lyster and his son, the present engineer. Between them they have constructed practically the whole of the Docks as you see them to-day, during the fifty years the onerous position of engineer-in-chief has been filled in succession by them; but, as you are to visit them to-day, I think you will agree with me that—like good wine—they "need no bush," and that the engineer might almost exclaim with Horace, "I have reared a monument more enduring than brass, and loftier than the pyramids' royal structure, which not the wasting shower nor the raving north wind can have power to overthrow."

In dealing with this great estate, over which more than £37,000,000 has been expended, a recent writer observes: "Liverpool must continue to see that her prestige, the most valuable thing she possesses, is unharmed, and that in the changing days she keeps pace with them. If the days gone by give an indication as to the future she will keep her watch-towers burning brightly and her citadel highest amongst the nations."

Mr. J. H. HANSON (Member of Council) said Mr. Young had described his Paper in its first paragraph as one that simply related to certain incidents of interest to surveyors in the history of the Mersey Dock Estate. On that point they would all agree that he had succeeded, for he had laid before them a list of transactions, such as those with which they were accustomed to deal, and had really made them almost wish that this Dock Estate could begin at the beginning and develop its resources over again. The Paper provided a valuable record, covering a period of nearly a hundred years, of an undertaking which had provided almost continuous work for a large number of members of their profession, and had undoubtedly largely tended to the prosperity of the port and city of Liverpool.

In reading the Paper he had been struck by one or two interesting points which, although not directly on the general lines, had some bearing on their profession. The first of those the author had omitted to read that morning. On page 544 of the Paper reference was made to Parliamentary applications on an occasion when five Bills relating to docks were all presented in the same Session, and when the Board of Trade reported in certain words that were there recorded, but which he believed the author had omitted to read: those Bills and the Report of the Board of Trade led to the passing of the Act of 1857. There appeared to be two bodies primarily concerned, and one of those, the Corporation, who had the management of the docks, appeared to have been playing the game of "Docks" with rather more cards than were usually dealt out. That was, in short, the meaning of the Board of Trade Report on that occasion, and it brought about the constitution of the Mersey Dock and

Harbour Board as at present constituted. There was little doubt that the change from municipal control and municipal interest to trading control and river interest had a great deal to do with the success of that great undertaking.

Another point was incidently touched on in the Paper, namely, that in the constitution of the Board politics were abolished. These matters must have had a great influence in the management of those estates.

Subsequent history of the transactions of the Dock Board showed the important part which surveyors had taken in enabling the Board to get possession of the lands that were necessary, and he had no doubt that the surveyors, and there were a large number whose services were requisitioned from time to time, had undoubtedly had something to do with the building up of that great capital expenditure of thirty-seven millions sterling. They were all indebted to the author for a great deal of valuable information, and he had the greatest pleasure in proposing that a vote of thanks be accorded him from that Meeting.

Mr. E. R. ROBSON (Fellow), in seconding the vote of thanks, said that between the years 1864 and 1871 he held the post of surveyor to the Liverpool Corporation, and had consequently listened to the Paper with the utmost interest.

Considering the valuable nature of the Paper and the mass of information which it contained, it would only be insulting their intelligence if he were to endeavour to enlarge upon it, but there were two things he should like to refer to. One was an episode, the other had reference to the source of the success and greatness of Liverpool and its docks.

The City of Liverpool did not like being deprived of the control of the docks, and when he took office in 1864 the whole subject was regarded as one not to be discussed. Then came the question of the approaches to the landing-stage, and there was a severe fight. Each side could see only its own case, and did not wish to give way. Fortunately the name of Mr. John Morris would stand out in connection with this subject. He did see both sides of the question, and he made a proposition which was placed before the parties, and in the course of an hour a settlement was effected which marked the period when all rivalry ceased between the two great bodies. Since then other matters had been settled in connection with the landing-stage and its approaches: to-day the largest floating stage in the world.

In dealing with the growth of Liverpool he should like to refer to one subject. From the return of the Shipowners' Association it appeared that the tonnage dealt with in the past year was 9,450,000 for foreign trade and 1,980,000 colonial, or a total of 11,430,000. It was interesting to know how this enormous prosperity of the docks and of Liverpool had been brought about and had grown up. The real reason had not been mentioned, and had the map on the wall been to a smaller scale he could have pointed out the secret at once to the Members. Their river presented in shape something like a gigantic bottle, with Birkenhead on the one side of the neck and Liverpool on the other. The tide flowed through the neck and then spread itself upwards and outwards like a lake. When the tide returned this enormous volume of water had to clear a passage through the bottle-neck, with the result that the great force exercised in this direction kept the bed of the river clear, and the only dredging necessary was

all lower down and about the bar. They owed to the shape of the river the wealth and prosperity of the Dock Board and the Port of Liverpool, which insured that it would not be silted up, and there was no reason why that prosperity should ever come to an end. He thanked the author for his Paper, which had contributed in a remarkable degree to the literature of the Dock Board, and he seconded the vote of thanks.

Sir ALEXANDER STENNING (Past-President) said he was afraid that he was not competent to discuss the Paper in all its details, but he thanked the author for getting together so many facts and in placing them before the Members in such a concise and able manner.

He noticed on page 547 of the Paper that the author referred to his presidential address, and it seemed to him that the construction that might be put upon the reference was that he (Sir Alexander) was not quite sure under what heading he should put foreshore land, whether it should come under that of food land or dwelling land, the reason of the omission being the same as that which had influenced him in omitting deer forests, that they so seldom came under the practical consideration of Members.

After what they had heard that day as to how such land could be utilised and made to afford employment to so many thousands, and to bring such prosperity to the great city of Liverpool, he certainly thought that foreshore land might not improperly be placed under the heading of food land.

He was sure that they would all accord a hearty vote of thanks to the author for his interesting Paper.

The vote of thanks having been put to the Meeting and carried unanimously,

Mr. YOUNG in returning thanks said he was extremely obliged to the Members for the way in which they had received his Paper and for the vote of thanks they had been good enough to accord him. Mr. Hanson was quite right in stating that he had omitted certain paragraphs; he had done so because as there was another Paper to follow and the morning being short it was necessary to curtail his remarks. He had therefore skipped over one or two paragraphs that he thought least interesting to surveyors, but he was glad to note that Mr. Hanson thought they were pertinent and of value.

With regard to Sir Alexander Stenning's remarks about deer forests and foreshore lands he was glad to hear his explanation, but though they were not to be classed together he thought he might endorse a remark which Mr. George Langridge had just made, viz., "that "deer forests and foreshores might be classed together "because they were both *dear* lands."

He was pleased to see Mr. Robson amongst them again, and it was gratifying to find that though he had been away from the old city of Liverpool for so many years he had been selected to second the vote of thanks that morning.

BADGERS RAKE.

HUBERT POTTS ESQ.

TOWNSHIP OF WILLASTON

U. B. CORBETT ESQ.

F. H. FOX ESQ.

U. B. CORBETT ESQ.

MRS HAIGH

to Ledsham Station

LED SHAM ESTATE.

SMALL HOLDINGS.

MRS HAIGH.

to Eastham

A. S. COLLARD ESQ.

Scale.

Links. 100 0. 1 2 3 4 5 10. 15 20 25 Chains.

From Puddington

From Queens Ferry

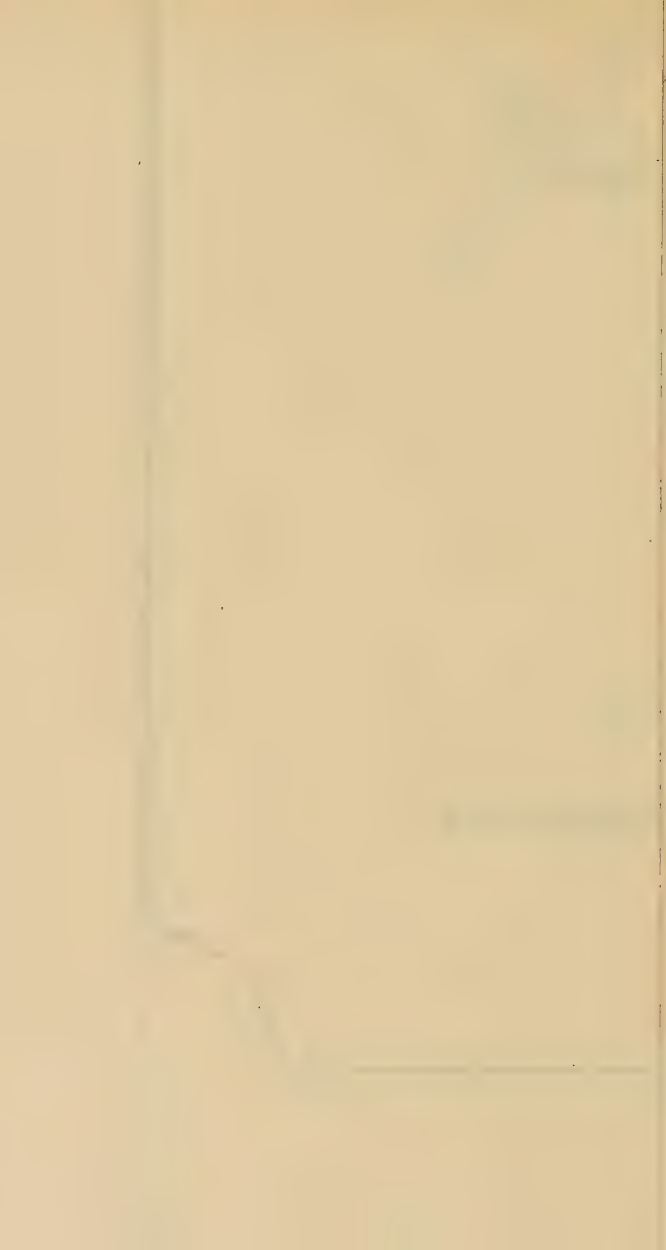
S. N. BENNETT ESQ.

R. T. RICHARDSON ESQ.
TOWNSHIP OF CAPENHURST.

REPAID
LATE R. C. NAYLOR ESQ.
TOWNSHIP OF LITTLE SUTTON.

Summary of Acreages & Rentals.

No.	Total Acres.	Rent per acre not including Rates.	Total Rent per annum
1	31.800	48/6	£ s. d. 77 2 0
2	25.623	38/6	49 19 0
3	19.356	43/6	42 13 0
4	26.076	43/6	57 7 0
5	26.765	43/6	56 14 0
6	31.560	43/6	69 5 0
7	26.670	44/6	59 19 0
8	27.000	45/6	62 1 0
9	29.076	54/6	79 17 0
10	49.681	39/-	96 15 0
11	47.911	31/-	75 11 0
12	26.413	53/6	71 17 8
13	23.446	53/6	63 8 0
14	28.621	53/6	76 10 10
15	25.369	49/6	63 8 0
16	40.109	49/6	99 18 0
17	49.345	47/6	117 3 0
18	42.694	48/-	103 2 0
19	45.683	46/6	106 4 0
20	50.000	48/-	120 0 0
21	29.764	49/-	73 11 0
22	50.060	48/-	120 0 0
23	14.296	58/-	41 9 0
24	4.500	58/-	13 0 0
25	8.000	90/-	36 0 0
26	6.000	88/6	26 10 0
27	7.115	58/9	20 19 0
28	7.424	90/-	33 8 0
29	13.639	76/3	52 0 0
30	1.867	84/-	7 16 0
31	2.064	84/-	8 13 0
32	3.584	84/-	15 1 0
33	.250	—	1 0 0
34	.446	10/per an.	5 10 0
35	.161	—	3 0 0
	.270	—	0 10 0
	823.313	—	—
	30.493	—	—
36	Shooting Rent	—	40 0 0
37	Acknowledgment for 9 Telephone Poles	—	0 9 0
	853.806	49/6	2047 10 6
	Average	—	—



SECOND PAPER.

CHESHIRE COUNTY COUNCIL SMALL HOLDINGS.

BY W. McCracken (FELLOW).

Rural depopulation, due to emigration, the inevitable outlet for the national spirit of adventure and colonising genius, and to the migration of labourers, artisans, and small shopkeepers from the country to our great towns, has long been deplored by all conversant with the circumstances and concerned for the future of our race. The causes which have brought about the disturbance in the old-time balance of population as between country and town have been many.

Physiologists tell us that in the flow of the blood through the blood vessels two forces are concerned, the *vis a fronte*, or drawing power, and the *vis a tergo*, or driving impulse. Both of these forces have been at work in producing a continuous flow of rural blood towards the great centres of population.

In considering the first, or attractive forces, we have to reckon with the gregarious instinct which pervades nearly all phases of animal life, and is especially strong in the human genus. The ploughman in his "lonely furrow" longs for companionship other than that of his horse, the rook, and the peewit. He has a hankering after shorter hours of labour, more holidays, more regular working hours, and exemption from Sunday

duties. Higher wages allure him, even though he often finds too late that towns' wages are only *apparently* and not *really* higher. His wife covets the house conveniences and the life of comparative idleness which some of her town sisters enjoy. All want to be where there is more "going on."

Belonging to the second, or driving-away set of causes, may be noted the aggregation of groups of small holdings into large farms with a view to economical management, a course so much in favour at one time; the starving to death of small industries consequent upon the growth of wholesale manufacture, the process of decay having been hastened by the greater facilities which railways have placed at the service of the consumers, enabling them to visit town shops, where they are offered a larger and more varied assortment of goods; the laying down to permanent pasture of large areas of the heavier lands previously under the plough, a course dictated by a succession of wet seasons and the low prices of the late seventies, the eighties, and the early nineties, and encouraged by the expansion of the dairy industry; the extended use of improved machinery, displacing labour while it is at work, and requiring in a less degree the skill of the local mechanic for its repair; this now being effected conveniently and cheaply from the stock of spare parts supplied by the large manufacturer or his local agent.

These are a few of the economic changes which have dismissed the small tradesman and reduced the amount of employment obtainable in country districts. They have also tended to make work more intermittent for those who remain.

Our system of elementary education, designed, as one might imagine it to have been, with a view to

fitting every boy to be a clerk and every girl to be a schoolmistress, and disregarding, as it does, the dignity of labour, has also much to answer for. In this department it is only fair to say that there is an earnest groping after a better way; but the problem to be worked out is one of extreme difficulty, and years of experiment must pass before its solution can be fully accomplished.

If the rural authorities have been content with a policy of "drift," it cannot be said that those responsible for the government of our great cities have, on the whole, done their part to preserve the purity and vigour of the stream of fresh blood they have so insatiably absorbed. The costly and unsatisfactory system which has hitherto passed muster has been one of housing the town workman in a manner which discourages whatever aspirations after decent living he may have, and of employing a large force of police to prevent his falling below a given standard.

There is, nevertheless, a germ of hope for the future in the Housing and Town Planning Act of 1909. The lowest parts of our cities, which gave our recent German visitors a conception of hell more vivid than any their imaginations had pictured, cannot remain always the reproach to our civilisation they are at present.

Too frequently in our cities the rustic newcomer ousts his weaker predecessor from his employment, and by-and-by, driven by pressure of competition, follows him to the slums, where conditions productive of high infantile mortality, and a low standard of vitality in the survivors, do not take long to undermine the virility of his stock. Not the least alarming feature of the case is that the majority of those who migrate from country to town are, like those who emigrate, the brightest intellectually, and the strongest physically: those left

behind, in an environment best adapted to the rearing of healthy families, being very often the less robust both in mind and in constitution. The process so long at work has been the converse of the "survival of the fittest."

The evils and their causes have been plain enough, but no authority, local or central, has had adequate powers for dealing with them.

Endeavours to recall to country life those who have taken up their abode in towns for any length of time are not likely to prove very successful, nor would their return, in most cases, be certain to benefit either themselves or the community. On the other hand, the checking of the drain upon the country's best blood has been recognised as an object worthy of determined effort. As the readiest and promptest means of attaining this object, it has been the aim of legislators to give the largest possible number opportunities of engaging in farming on their own account, in the hope that the stimulus of earning a livelihood amidst surroundings healthy for their families, together with the feeling of independence born of working for themselves, may strengthen the ties that bind them to the country.

The Small Holdings Act of 1892 was a well-meant effort to attain the desired end, but the carrying out of that Act was entirely optional. County councils were expected to appoint small holdings committees; this they did, and as a rule there they stopped. The results were, to use the mixed metaphor of one enthusiast, "but a flea bite in the ocean." Under the Act of 1892 during the 15 years it had been in force, only 891 acres of land were acquired for small holdings in the whole of England, an area only slightly exceeding that of Ledsham Estate.

The call for more effective action increased in volume and force. This call was endorsed by the Report of the Departmental Committee of the Board of Agriculture and Fisheries on Small Holdings, published in 1906. Lord Carrington's Small Holdings and Allotments Act of 1907 was the response.

In this Act (1907) the *may* of the 1892 Act becomes *must*; and—a point of vital importance—*can* is added, inasmuch as a special fund is provided by the Treasury, and workable machinery established for its administration. The Local Government Board has added its encouragement by giving its sanction to the borrowing of money for purchase and equipment upon better terms than formerly.

The provisions of this Act are so well known that I propose to allude only to a few of them now, but I shall give a concrete instance of their working in relation to the estate of Ledsham.

Not only have all reasonable demands for small holdings to be satisfied, but steps have to be taken to create and stimulate a desire for them. Commissioners have been appointed to make inquiry as to the demand for small holdings in the different counties, and with respect to any suitable land that may be available to satisfy it. They report to the Board of Agriculture and Fisheries, who are invested with strong powers to enable them to enforce the carrying out of the Act, or, if necessary, to carry it out themselves and charge defaulting counties with the cost.

For the purposes of the Acts of 1892 and 1907 a "small holding" means an agricultural holding which exceeds one acre and either does not exceed fifty acres, or if exceeding fifty acres is, at the date of sale or

letting, of annual value for the purposes of income tax not exceeding £50.

When schemes showing how land for small holdings is to be acquired, divided, equipped, and let, have been prepared by the county councils, and submitted to and approved by the Board of Agriculture, the Board may contribute half the loss should any be incurred. In preparing such schemes it has to be borne in mind that they are intended to be self-supporting. Charity rents are not permitted. The rents charged must be such as will recoup all expenses, excepting the expenses incurred by the council in the proceedings in relation to the acquisition of the land, and these may be repaid by the Board of Agriculture and Fisheries.

The Act of 1892 contemplated chiefly the *sale* of land to small owners, while that of 1907 favours the *letting* of land to tenants. Under the Act of 1907, land which it is intended to sell can only be acquired by voluntary agreement. If it be a county council's intention to let the land it may be leased or purchased by agreement; or, if it cannot be obtained by agreement, it may be taken compulsorily.

Whatever be the relative merits of the two systems, tenancies and peasant proprietary, considered upon general grounds, I have myself no doubt that the former will insure the placing of people upon the land much more rapidly than could be done under the latter system. I believe the tenancy system to be the more popular amongst the majority of small farmers, to whom the prospect that some of their posterity may own land which has to be paid for in annual instalments for eighty years, is one that offers but scanty attraction in comparison with the immediate advantage of having their premises kept in repair for them, and the hope of obtain-

ing higher interest for their small capital. The Cheshire County Council has received only one application for the purchase of land, and that was virtually an application for a building site. In some other parts of the country the desire to own land is much stronger.

The adoption of the tenancy system has disarmed all opposition on the part of great landowners to the multiplication of small farms by county councils; an important consideration being that if the tenant of the small holding should fail in a flagrant degree in his duty to his holding, to his neighbours, or to the county council, and become a nuisance to the community, he can be replaced by a better man.

It is doubtful whether an estate, situated like Ledsham near a number of wealthy centres where there is a demand for land on the part of those who can afford to regard its possession as a luxury, would remain permanently in the hands of the small owners to whom it might be allotted.

Other possible objections to the working of the Act have been anticipated by the exemption of parks, gardens, pleasure grounds, home farms, and certain other kinds of property from compulsory acquisition. Moreover, when the owner of land which has been leased compulsorily by the county council can prove to the satisfaction of the Board of Agriculture and Fisheries that it is required for building, mining, or industrial purposes, he is empowered to resume possession upon a twelve months' notice.

Under the Act of 1907 each county council was required in the first instance to appoint a small holdings and allotments committee, composed either entirely of the members of the county council, or of a majority of members of the county council and a

minority of co-opted members. This preliminary duty was performed by the Cheshire County Council on the 21st May, 1908. The committee, as now constituted, consists of thirty-two members of the county council, of whom the chairman and vice-chairman of the council are *ex-officio* members, with the addition of ten co-opted members.

Mr. E. G. Leycester, the deputy-chairman under the 1892 Act, was appointed chairman of the committee, the previous chairman having resigned his seat upon the council. The committee and the county have reason to congratulate themselves upon that appointment, and they will always owe Mr. Leycester a heavy debt of gratitude.

The Cheshire County Council has delegated all its powers under the Act to the small holdings and allotments committee, with the exception of those relating to the buying of land, the borrowing of money, and levying a rate. In order to complete the organisation locally, sub-committees were established for each union area, and upon these representatives of the rural district councils and others were co-opted. The duties of these sub-committees are—to keep a look-out for suitable land; to ascertain the local demand for land; to inquire into the characters and qualifications of applicants; to recommend how the best use may be made of land acquired; and generally to look after the small holdings within their areas, subject to the approval of the small holdings and allotments committee itself.

The organisation of the various committees was hardly completed before they were called out for active service in various directions.

One of the first steps taken was to call the attention

of all concerned to the provisions of the new Act by advertisements and posters. Applications for land, whether for purchase or for hire, were invited, forms of application supplied, and full information given to inquirers. Meanwhile, all land known to be available and likely to be suitable was inspected and reported upon. The first property to come within reach was that of Ledsham, advertised to be offered for sale on the 31st July, 1908. Both the small holdings and allotments committee, and the Wirral sub-committee, regarded the land as suitable for small holdings, and it was decided to try to buy it for the county. It was necessary to obtain a report upon the estate from a competent valuer, and Mr. Henry Swetenham, F.S.I., advised the purchase of 853 acres, provided that area could be obtained below a given price. This report and valuation, together with a tentative scheme for the laying out of the land for small holdings, received the approval of the small holdings and allotments committee on the 16th July, and the sanction of the County Council at a specially called meeting on the 24th July, 1908. The Board of Agriculture and Fisheries signified its approval.

On the 31st July the estate was put up to auction and bought for the County Council by the clerk, Mr. Reginald Potts, for £35,000 ; a sum substantially within the limit fixed by the valuation.

To carry through this transaction the whole of the new machinery that had been instituted had to work at high pressure from the very commencement. It may be noted as a gratifying feature, and as showing what may be done in business matters of a confidential nature even by large committees, that, although the members of the committees furnished with copies of the valuer's report

numbered over ninety, the majority of whom were married, no inkling of the limit to which the County Council had decided to go was permitted to leak out.

It now became necessary to appoint a land agent to look after the growing small holdings work of the whole county, and in the month of August Mr. W. H. Lancaster was chosen for the post. The County Council has been fortunate in finding one whose enthusiasm is directed by so large a measure of experience and judgment.

I desire here to express my hearty thanks to Mr. Lancaster for his kindness in furnishing me with all the plans, particulars, and figures I have desired.

The manor of Ledsham was in olden times the centre of the great Forest of Wyrall. So closely wooded was the whole peninsula lying between the estuaries of the Mersey and the Dee that it gave rise to the popular saying :—

“ From Blacon Point unto Hilbree
A squirrel may leap from tree to tree ; ”

but this description no longer applies to the open and fertile Mesopotamia of Cheshire.

Ledsham, the “ ham ” or home of the Saxon family of Levede, or Lede, originally formed part of the ancient ecclesiastical parish of Neston. In 1859 the whole of the manor, with the exception of two small portions belonging to other parishes, was joined with Capenhurst, a township of Shotwick parish, to form the new ecclesiastical parish of Capenhurst.

Ledsham is in the petty sessional division, rural district area, and union of Wirral.

At the time of the Domesday survey the manor of Ledsham belonged to a family of Vernons. It subse-

quently passed into the possession of the Gerrards, who, during the reign of Queen Elizabeth, sold it to the Massies for £200. It was long held from the Prince of Wales, as Earl of Chester, "by the services of half a knight's fee." From the Massies the manor descended, through the Stanleys of Hooton, to the family of the late owner.

Ledsham Estate is favourably situated for the purpose the County Council had in view. It is almost midway between the city of Chester ($7\frac{1}{2}$ miles) and Birkenhead ($8\frac{1}{2}$ miles distant).

The Wirral is fringed with towns and villages round the greater part of its coast line. I am indebted to the courtesy of the officials of the various authorities for the estimated populations of each of these urban areas for the current year. On one side there is the city of Chester with 39,515; on the other the county borough of Birkenhead, with 122,232; round the coasts the urban districts of Parkgate and Neston, 4,615; Hoylake and West Kirby, 13,944; Wallasey (including Liscard, Egremont, New Brighton, and Poulton-cum-Seacombe), 75,000; Whitby and Ellesmere Port, 10,000; and Lower Bebington, 11,942. These urban areas, by which the Wirral is almost encircled, without taking into the reckoning this great city of Liverpool, offer ready markets for every kind of produce Ledsham can send them.

Access to the estate is good. The west end runs close to Ledsham station; the east end approaches Capenhurst station. Both stations are on the main line from Chester to Birkenhead. The property is bounded and intersected by roads to such an extent that when the land was divided up a site by the side of a public highway was found available for every new home-

stead. The cost of road making was thus reduced to a minimum.

At the time of purchase the existing farmhouses were already supplied with water by the West Cheshire Water Company. The new homesteads, to which the mains have been extended, take their water from the same source.

In general aspect Ledsham is flat, though providing sufficient falls for drainage purposes. At no point does it exceed an elevation of 150 feet above sea level. The difference between the highest and lowest points is only about 20 feet.

The soil is of a loamy character, and on the whole easy to work, though varying somewhat in texture. Like most Cheshire soils, that of Ledsham consists of drift resting upon the Trias formation. Two-thirds of the land on the north-east side, including the village of Ledsham where some of the finest land occurs, lies upon the Upper Mottled Sandstones of the Bunter. The rock is exposed close to the village. The remaining one-third, a belt of almost uniform width occupying the whole of the south-western side, covers the pebble beds of the Bunter. The land situated near the steadings was generally in good heart. The fields furthest from the steadings and manure heaps were, as sometimes happens, rough and starved.

Of the total area of 853 acres, 635 acres were in grass, 188 acres in tillage, and 30 acres taken up by plantations and roads.

Everything about the property when it was taken over was in a more or less dilapidated condition, and this greatly increased the initial expenditure. At the time of its purchase the land was held by six farm

tenants, who were under notice to quit at Lady Day, 1909.

In the case of a Lady Day term, as understood in Cheshire, all the tillage and nearly all the grass land, together with certain stable accommodation, change hands on the 2nd February. Only a small field upon which the cattle may be turned out, called a "Boosey Pasture," is retained to the end of the tenancy, and given up along with the house and the remainder of the buildings on the 1st of May. The farm tenants claimed certain rights of ploughing up pasture for away-growing crop. Had these rights been enforced much pasture would have been destroyed, and there would have been a most undesirable period of overlapping tenancies during the summer of 1909. It was agreed that no pasture should be broken up, and that the value of the alleged rights should be settled by arbitration. Compensation for unexhausted improvements was the subject of a separate reference. (The sums awarded in these arbitrations are given in the statement of receipts and expenditure upon page 585.)

Several draft schemes for the sub-division of the estate were prepared by the land agent. The scheme finally adopted provides twenty-four small holdings, ranging from $4\frac{1}{2}$ acres to 50 acres in extent. The average area is about 32 acres, the average rent about 46s. per acre. There are also five market gardens of from 6 to $13\frac{1}{2}$ acres, averaging $8\frac{1}{2}$ acres in area, and 83s. per acre in rent. Three cottages with small gardens complete the list of tenancies.

All the small holdings are provided with homesteads. Sixteen of these homesteads are entirely new; in the other cases existing houses and buildings have been re-

paired and adapted. Four new houses have been built in connection with the market gardens, and one old one has been put in order and utilised. Where practicable the homesteads have been, for the sake of economy, built in semi-detached pairs. It was found possible to build six pairs in this way. The other four new homesteads stand by themselves. Each pair cost £480, and the single houses £270.

The dwelling-houses have walls of 9-inch brickwork rough-cast with cement and pebbles. The roofs are slated. Each house provides on the ground floor a good-sized parlour—useable as a bedroom upon occasion—living-room with cooking range, scullery, pantry, coal-house, and wash-house; upstairs there are three good bedrooms. There is an earth closet detached from the house.

The farm buildings are of plain brick with slate roofs. The cowsheds are 15 feet wide; their length varies with the size of the holdings and the number of animals to be accommodated; measured between centres they allow 7 feet for each double stall. The cubic air space is about 560 feet for each cow. The floors of the cowsheds are laid with wire cut blue bricks set on edge upon 6 inches of lime concrete.

Food-mixing house, calphen, loose boxes, two-stall stable, pigstyes, implement shed, and granary complete the outside accommodation.

Each set of buildings has cost about £250.

As will be apparent to those who do us the honour of paying a visit to Ledsham, these homesteads have been designed mainly with a view to economy.

I ought to mention parenthetically that the latest type of houses and farm buildings erected for the County Council, as illustrated in the Appendix, are more commodious than those of Ledsham. The walls of

the dwelling-houses are built with a cavity to the first floor, and they are not rough-cast.

A large farmhouse and steading have been divided so as to provide for two holdings; existing steadings, repaired and adapted, serve the remaining six holdings.

Houses, smaller but similar in character to those upon the small holdings, have been built for four of the five market gardens at a cost of £215 for each house. The cost of each set of outbuildings was £60.

The building of all the homesteads was comprised in one contract, which was entered into after a large number of tenders had been received and compared.

The ceremony of laying the foundation stone of the first of the new homesteads was performed by Mrs. Brocklebank, of Poulton Royd, on the 13th March, 1909.

Considerable delay in completing the contract was occasioned by the stormy weather which prevailed during the early stages of the building operations, and this prevented a number of tenants from living upon their holdings as early as was anticipated. Rent abatements were allowed to compensate for this delay.

The fencing materials have been supplied and erected by contract at the rate of 1s. 6d. per running yard. The type of fence selected is a three-rail mortised one, of Baltic fir creosoted under pressure. The following dimensions were specified:—

Posts, 6 inches by 3 inches, 5 feet long, set at 9-foot centres, with $3\frac{1}{2}$ -inch by $1\frac{1}{2}$ -inch intermediate uprights, and rails $3\frac{1}{2}$ inches by $1\frac{1}{2}$ inches, 10 feet long with scarfed ends.

The occupation roads and also the approaches to

the homesteads have been formed of clinkers, of which 2,500 tons were bought by the County Council from an iron works at Ellesmere Port. The tenants have been supplied free of charge with the quantities required for their holdings, and they have been paid for the cartage.

The following are the various items of expenditure incurred in the development of the whole estate:—

	£	s.	d.
Building . . .	10,602	16	0
Fencing . . .	378	6	0
Road making . .	318	3	5
Draining and ditching .	24	17	5
	£11,324	2	10

The Local Government Board have allowed eighty years for the repayment of the purchase money, borrowed on a $3\frac{1}{2}$ per cent. basis, to pay for the estate and for the amounts paid as compensation to the outgoing tenants; fifty years for buildings; thirty years for drainage; twenty years for road making; and thirteen years for timber fencing.

The money has been borrowed upon the annuity system, with equal yearly payments throughout the whole period. This method was preferred to the instalment system, under which larger payments would have been made at the beginning, the annual charge gradually diminishing as the loan was repaid until extinguished at the end of the period.

The manner in which the various items of borrowed capital have been dealt with is set out in the following statement of receipts and expenditure:—

INCOME—	£	s.	d.	£	s.	d.
Rentals on Estate, including Shooting Rent and Additional Rentals in respect to extra Buildings, &c. ...				2,047	10	6

PAYMENTS—

Repayment of Loan £35,000 Purchase Money in equal annual amounts of Principal and Interest combined, 3½ per cent. 80 years, £3 14s. 9¼d. per £100	1,308	9	9
Do. do. £47 5s. Stamp Duty and Commissioners' Expenses, do. do. 50 years, £4 5s. 3½d. per £100 ...	2	0	6
Do. do. £558, Compensation to Out- going Tenants for not ploughing Grass Lands, do. do. 80 years, £3 14s. 9¼d. per £100	20	17	3
Do. do. £558 10s. Tenant-Right for unexhausted Improvements, &c., do. do. 80 years, £3 14s. 9¼d. per £100	20	17	8

EQUIPMENT LOANS—

Do. do. £10,602 10s. New Buildings and General Equipment do. do. 50 years, £4 5s. 3½d. per £100 ...	452	3	3
Do. do. £378 6s. Timber Fencing, less £150 worth proposed Timber Sales, £228 6s. do. do. 13 years, £9 14s. 1½d. per £100	22	3	2
Do. do. £318 3s. 5d. Road Making, &c., do. do. 20 years, £7 0s. 8¾d. per £100	22	5	0
Do. do. £24 17s. 5d. Drainage, &c., do. do. 30 years, £5 8s. 9d. per £100	1	7	0
Land Tax and Tithe	60	0	0
Management Expenses and Repairs ...	137	6	11
	£2,047 10 6		

The rents cover the interest and repayment of all the loans, and upon the smallest holdings these charges inevitably fall most heavily per acre.

Let us take for instance the cost per acre in the case of a holding of 48 acres as an example of those of the

largest size. The capital expenditure upon buildings amounted to £11 4s. 6d., and upon fencing and minor improvements to 12s. 6d., a total of £11 17s. To provide for interest and repayment of capital the tenant is charged 9s. 7d. upon the cost of buildings, and 1s. 2½d. upon the cost of fencing, &c., or altogether an addition to his rent of 10s. 9½d. per acre per annum.

The corresponding figures per acre for one of the smaller holdings, 27 acres in extent, were:—Cost of buildings £18 2s. 3d., cost of fencing, &c., 17s. 9d., total £19. Annual charge for buildings 15s. 5d., and for fencing, &c., 1s. 8½d., total 17s. 1½d.

In the case of a market garden of 8 acres the amounts per acre were:—Buildings £37 0s. 5d., fencing, &c., 10s., total £37 10s. 5d., necessitating an annual charge of £1 11s. 7d. for buildings and 11½d. for fencing, &c., or £1 12s. 6½d. per acre.

Much time and many committee meetings were devoted to the interviewing of applicants and the selection of tenants. Character, previous experience of farm work, the possession of cattle and cash, and the number of members in each family capable of helping with the farm work, were the leading subjects of inquiry. Full information concerning the applicant himself was obtained readily enough, but it was not possible to ascertain much about the capabilities of his wife, upon which the success of the small holding will probably depend more than upon his own. Upon her, with such help as her family can give, will fall, in addition to her household duties, the general supervision of the farm during her husband's absence, the care of the live stock, and the manipulation of the milk, cheese, butter, poultry, and eggs. As has been remarked in other parts of the country, the amount of thrift on the part of applicants

revealed by these investigations was a pleasant surprise to the various sub-committees.

With one exception all the previous farm tenants remained upon the estate as small holders under the County Council. The new tenants were drawn from all parts of the county, and judging from the manner in which they have set about putting their holdings into working order there seems to be little doubt that nearly all of them will justify their selection.

All the holdings are let upon "year-to-year" tenancies with the usual restrictions and reservations, and subject to notice to quit given by either party six months before the 2nd of February in any year. The rents become due half-yearly. The tenants pay all ordinary tenants' rates. These amount to 3*s.* 4*d.* upon the buildings, and half that rate upon the land.

That dairy farming is the prevailing industry will be at once apparent on glancing at the column headed "cows" in the census table given on next page.

In the case of all the holdings, with the exception of those managed as market gardens, milk is the staple product. Most of the milk is sold in its natural state; but there are some cheese makers and a few who sell butter. Pigs and poultry furnish the chief subsidiary sources of income. Several of the tenants are dealers in milk, pigs, and other kinds of farm produce. One carries on quite an extensive laundry business for customers in the neighbouring towns; others work in their spare time for their neighbours, and for gentlemen resident in the neighbourhood.

For the general convenience a post office has been opened at one of the houses.

I have dealt in this Paper almost exclusively with the administration of the Small Holdings and Allotments

Act in a single division of Cheshire as one type of a new departure. Its administration in other parts of the county, and in other counties, what has been done and what left undone, is it not all written in the *Annual Reports of Proceedings under the Small Holdings and*

CENSUS OF PEOPLE AND FARM LIVE STOCK UPON
LEDSHAM ESTATE.

No. on Plan.	Number of Persons in Household.	Horses.	Cows.	Young Cattle.	Sheep.	Pigs.	Approximate Number of Poultry.
1	2	1	12	5	20	7	100
2	2	—	10	—	—	6	30
3	3	1	7	3	—	6	30
4	3	1	8	—	—	6	40
5	2	1	8	—	—	4	30
6	5	1	8	—	—	6	40
7	6	2	8	2	—	6	40
8	3	3	10	2	—	10	50
9	2	1	12	—	—	10	30
10	8	2	13	6	—	10	60
11	2	1	15	3	20	8	60
12	5	1	10	—	—	8	20
13	2	—	12	—	—	8	20
14	2	1	10	1	—	9	30
15	8	1	10	4	—	8	20
16	2	2	15	3	—	6	20
17	3	2	25	4	—	10	50
18	3	2	17	4	—	8	20
19	7	2	16	—	—	8	50
20	2	2	29	—	—	10	40
21	3	2	14	3	—	8	40
22	3	2	26	4	—	12	30
23	4	1	7	—	—	6	20
24	7	—	2	—	—	2	15
25	5	—	—	—	—	—	20
26	2	—	—	—	—	—	—
27	7	1	2	—	—	4	15
28	3	1	2	—	—	4	—
29	5	1	—	—	—	6	10
30	6	—	1	1	—	2	—
31	8	—	1	—	—	2	20
32	3	—	—	—	—	—	—
	128	35	310	45	40	200	950

Allotments Act, published on behalf of the Board of Agriculture and Fisheries? A general statement of the work done by the Cheshire County Council will be found in the Appendix.

Little more than two years ago the people of Ledsham numbered 30; now there is a community of nearly 130, with power to add to their number.

There does not appear to be any special reason for undue solicitude as to the future of Ledsham. The land was bought at a reasonable price, and its ready adaptability has enabled its development to be carried out at a relatively low cost, which in turn has made it possible to let the holdings at moderate rents. The soil is of a kind not likely to suffer badly from extremes of wet or drought. Markets for produce are within 'easy reach.

Cheshire is a county of small holdings, where they have long passed the experimental stage. As an instance of the extent to which small holdings prevail in the county I may mention that upon the Cheshire estates belonging to the Earl of Crewe, within my own stewardship, out of every 100 farms and crofts 78 are small holdings within the definition of the Act. Speaking generally, the districts in which the prevailing conditions have proved favourable to small holdings in the past may, I think, be regarded as those in which an increase in the number of small holdings is most likely to be successful in the future.

In comparison with the large farmer whom the small holder has displaced, the latter will have to bestow more labour per acre upon his land, and give closer attention to small industries. His farming will be more intensive. The need for economy of management, formerly met by

increasing the size of farms, must, in relation to small holdings, find its solution in co-operation.

At Ledsham a complete system of co-operation has yet to be inaugurated; but a successful beginning has been made upon a small scale. Lecturers from the Agricultural Organisation Society have explained to the tenants the directions in which co-operation may be of use to them, and when the small holders have had time to know each other, and to develop further the spirit of comradeship and mutual helpfulness which has taken root amongst them, a seaworthy scheme of co-operation may be launched under favourable auspices. In due course special instruction by experts will no doubt be provided in the principles of agriculture, dairying, poultry and bee management, and gardening.

When it is seen that the new people "mean business," the attitude of not unnatural cynicism with which they have been confronted in certain quarters will give place to one of respect.

The small holders may themselves be relied upon to develop a sentiment of self-respect and jealousy for the good name of the community to which they belong. We anticipate their rearing a sturdy, well-informed, and self-reliant race; and we look forward to the time when to be a "Ledshamite" may be regarded as *prima facie* evidence, not only of respectability, but also of attachment to the soil and skill in its industries.

For Ledsham, no doubt, as for all,

"The future hides in it
Gladness and Sorrow,"

but—WE HOPE.

APPENDIX.

LEDHAM ESTATE.

SUMMARY OF HOLDINGS, RENTALS, &C.

No.	Grass Acres.	Arable Acres.	Total Acres.	Rent per Acre not including Rates.	Total Rent per Annum.	REMARKS <i>Re</i> BUILDING ACCOMMODATION.
1	31'800	—	31'800	48/6	£ 77 2 0	Existing House and Buildings.
2	26'623	—	25'623	38/6	49 19 0	New House and Buildings.
3	16'356	3'000	19'356	43/6	42 13 0	Do. do.
4	16'795	9'281	26'076	43 6	57 7 0	Do. do.
5	15'652	10'913	26'765	43/6	56 14 0	Do. do.
6	24'775	6'785	31'560	43/6	69 5 0	Do. do.
7	26'670	—	26'670	44/6	59 19 0	Do. do.
8	24'799	2'201	27'000	45/6	62 1 0	Do. do.
9	29'076	—	29'076	54/6	79 17 0	New House and Buildings.
10	38'210	11'421	49'681	39/-	96 15 0	Existing House and Buildings.
11	42'894	5'017	47'911	31/-	75 11 0	New House and Buildings.
12	26'413	—	26'413	53/6	71 17 8	Do. do.
13	23'446	—	23'446	53/6	63 8 0	Do. do.
14	28'621	—	28'621	53 6	76 10 10	Do. do.
15	16'414	8'955	25'369	49/6	63 8 0	Do. do.
16	15'068	25'041	40'109	49/6	99 18 0	Do. do.
17	22'726	26'619	49'345	47/6	117 3 0	Existing House and Buildings.
18	33'263	9'431	42'694	48/-	103 2 0	New House and Buildings.
19	28'528	17'155	45'683	46/6	106 4 0	Existing House and Buildings.
20	50'000	—	50'000	48/-	120 0 0	Do. do.
21	19'746	10'018	29'764	49/-	73 11 0	New House and Buildings.
22	50'000	—	50'000	48/-	120 0 0	Existing House and Buildings.
23	14'296	—	14'296	58/-	41 9 0	Do. do.
24	4'500	—	4'500	58/-	13 0 0	Existing Cottage.
25	—	8'000	8'000	90/-	36 0 0	New House.
26	—	6'000	6'000	88/6	26 10 0	Do.
27	—	7'115	7'115	58/9	20 19 0	Existing Cottage.
28	—	7'424	7'424	90/-	33 8 0	New House.
29	—	13'639	13'639	76/3	52 0 0	Do.
ALLOTMENT FIELD.						
30	1'867	—	1'867	84/-	7 16 0	Existing Cottage.
31	2'064	—	2'064	84/-	8 13 0	
32	3'584	—	3'584	84/-	15 1 0	
COTTAGES AND SMALL GARDENS.						
33	Cottage.	£1 per an.	250	—	1 0 0	
34	Cottage.	£5 per an.	446	10/- per an.	5 10 0	
35	Cottage.	£3 per an.	161	—	3 0 0	
	Land let as small Gardens	.. ..	270	—	0 10 0	
		TOTAL ..	823'313			
	Lands Woods, Lanes, &c.	in hand, Ponds, &c. ..	30'493	—	—	
36	Shooting	—	—	—	40 0 0	SHOOTING RENT.
37	Ground	Rent, 9 poles at 1/- pole ..	—	—	0 9 0	TELEPHONE POLE RENTS.
			853'806	49/6 Average.	2,047 10 6	

The smallest area equipped with buildings by the Cheshire County Council is $14\frac{1}{4}$ acres at Brindley, let at £4 per acre.

Apart from the Brindley Small Holding and the land let as market gardens, the highest rent per acre is 69s.; the lowest rent is 31s.; the average, including market gardens, is 48s. per acre.

Upon the County Council's books there are still the names of 168 applicants for some 4,000 acres.

The total cost of small holdings to the County of Cheshire, up to this date, for certain expenses not refunded to the County by the Board of Agriculture and Fisheries or recouped from the rents of tenants, amounts to £131.

SMALL HOLDINGS OWNED AND LEASED BY THE CHESHIRE COUNTY COUNCIL.

Name of Property.	Acreage.	Price.	Cost of Equipment.	Number of Tenants.	Rents paid.	Rents receivable.
PURCHASED :						
Ledsham	852·821	£ 35,000	£ s. d. 11,324 2 10	32		£ s. d. 2,047 10 6
Leighton	30·300	1,500	644 12 0	1		100 0 0
Tarvin	87·437	4,200	627 17 7	31		257 1 0
Bartherton	415·539	20,195	6,016 0 0	11		1,280 0 0
Baddiley	163·965	7,500	1,426 12 0	3		442 12 0
*Moston	117·370	4,900				
*Bridge House	195·956	8,250				
Haslington	127·693	6,000				
	1991·081	†87,545	20,039 4 5	78		4,127 3 6
LEASED :						
Delamere (Oakmere) ..	356·141	}		8	403 0 0	724 15 9
.. (Land at Rail- way Station)	46·512		5,000 0 0	2	†107 0 0	122 0 0
.. (Land at Norley)	24·504			1	†58 0 0	64 0 0
Brindley	14·289		562 5 6	1	29 12 0	57 3 0
	441·446		5,562 5 6	12	597 12 0	967 18 9
Particulars of total area acquired	2432·527		25,601 9 11	90		5,095 2 9

* No scheme yet prepared.

† £43 19s. 4d. average price per acre.

‡ These rents are for land equipped for Small Holdings.

Mr. S. H. COWPER COLES (Member of Council), in proposing a hearty vote of thanks to Mr. McCracken for his Paper, said he must congratulate the author on the flourishing state of small holdings in Cheshire and the Cheshire County Council on being so fortunate as to have acquired the estate they had. He gathered from the Paper, and also from the map attached, that this was in a most favourable situation so far as roads, railways, and adjoining markets were concerned, and had also a growing population round it. But although the land was acquired so favourably there was one point that had occurred to him, and doubtless would do to others when they saw the table at the end of the Paper, viz., that, for cost of equipment, there had been added to the purchase price something like 25 per cent., an amount which he presumed was also included in the repayment loan.

The conditions were so favourable at Ledsham to-day that many who had to deal with the administration of the Act felt that this was a case that could hardly be taken as an example of what obtained in other counties. Here they had small holdings in an extremely good position with a fine soil. But he was puzzled by the statement in the Paper that the tenants holding under the County Council were against the principle of purchasing their holdings, and the deductions drawn as to which was the better system—tenancy or purchase. He knew the question was an economic one entirely outside politics, but it was one that might lead to great trouble in the future.

At the present time in Cheshire they were acquiring a number of small holdings, and the small holder in his rental had to pay off the loans entirely, and the County Council in the end were to have the

small holding as their property without contributing one cent towards it. This was an economic question fraught with grave difficulties and might bring about a political upheaval amongst the very people for whom these small holdings had been acquired, when they realised they were paying simply to free an estate for the County Council hereafter. The only way he could see out of the difficulty was to get some amendment to the Act, and he thought as surveyors they ought to consider that question. When a county council had purchased an estate for small holdings he did not see what difficulties there could be in selling to the small owner upon favourable terms and conditions, and there should be some amendment whereby the tenants could acquire their holdings by purchase extending over a period of years, without being in the position of purchasing them for the county council. He quite agreed with the reader of the Paper that at present they would not receive many applications for purchase but the fact that county councils were acquiring land under the present Act was one reason for this scarcity of applicants.

They were all anxious to know what would be the future of small holdings, and they could congratulate themselves on the way in which the Commissioners had up to now done their work and met them and the County Council in their methods; but additional Commissioners had now been appointed, and if these new appointments were made with a view to creating an artificial demand for small holdings, he was afraid the Act would come to grief.

The author had touched on the question of education in connection with small holdings, and he was glad to say that at the present time a Departmental Committee

of the Board of Agriculture and Board of Education was sitting to deal with this question, with a view to encouraging boys and girls to follow the trades of their parents instead of aspiring to positions that would lead to their rushing to the towns. It was satisfactory to know that The Institution was represented by two Members on that committee.

The economic changes that would be brought about by small holdings had been referred to, and he wondered what would be the effect if the Postmaster-General extended the telephone service in accordance with the suggestions which he had so generously held out to farmers.

He thanked the author for his Paper, and looked forward on the morrow to seeing the small holdings to which it referred.

Mr. T. A. DICKSON (Fellow) said he had much pleasure in seconding a very hearty vote of thanks to his old friend Mr. McCracken for the excellent Paper he had given them on a subject which occupied so much attention at the present time.

Before referring in any detail to the Paper, might he be allowed just for a moment to make a personal digression. Although something like twenty-one years ago his work took him to another part of the country, he was one of the small body of members present in a room in King Street, Manchester, when that Provincial Committee was inaugurated, and when they elected as their first chairman that grand old man, John Cross. As one of the original members he desired to congratulate the Provincial Committee upon the excellent growth it had made in the meantime.

Mr. McCracken had alluded to the appointment of a small holding committee of the County Council, and of the good fortune the county of Cheshire had met with in the appointment of the chairman of that committee. Those of them who had had some experience of the working of that Act knew how much depended upon such a committee and on its chairman. Its first difficulty was to satisfy itself of the *bona fides* of the applicants for small holdings. Then there was the difficulty of finding land for them, and when they had hit upon the land it was not easy in all cases to acquire it without injustice to the sitting tenant or the landlord. In Cheshire they seemed to have been fortunate in combating some of these difficulties. As Mr. Cowper Coles had just remarked, the experience of Cheshire made some of them who lived in less favoured parts of the country very jealous of the facility with which the Act worked in that county. They had just heard that in Cheshire the access was good, the markets excellent and close to the holdings, that it was a dairy country with a good climate, although some of them thought there was too much rain, and last but not least that the people who applied for these small holdings were the right sort; and, though as a confirmed bachelor the reader of the Paper could not resist a quiet dig at his confrères on the committee, that the wives of the small holders were also the right sort.

These five things went far to secure the success of small holdings, and though the cost of land and equipment might seem at the outset expensive, yet all Members would agree that for small holdings they must have good land. It was no use going for poor land or purchasing cheap land because it was cheap, for really cheap land was not suitable. Again, when they had purchased

cheap land and erected their buildings, the proportion of cost for these was such as to make the rent of such land almost prohibitive.

He would like to ask a question as to the claim of the outgoing tenants to plough up pasture land for an "away-going crop." Were tenants entitled to plough up pasture when they left their holdings?

Then again, he was glad to see the reference to the cottages. He had had a good deal of experience in building cottages, and had found cavity walls superior to solid 9-inch walls.

In the statement of income and expenditure he noticed amongst the income an item for shooting rights. In his part of the country he was afraid they could not depend upon getting anything for the shooting after the first year because the shooting tenant would say there was no game on the land. He lived in a country where shoemakers abounded, and they generally had first go.

He noticed in the Paper that the repayment of the loan was spread over a period of eighty years. He did not know how Cheshire got over the Public Loan Board, but in his county they would not grant a loan for so long a period for land and buildings. They would give them eighty years for land only and fifty years for buildings on the land, making certain deductions for buildings.

Then again, he saw the Cheshire County Council were making the tenants the proud benefactors of future generations by presenting the County Council at the end of eighty years with the land free. On the other hand they ought perhaps to remember that the County Council took the risks and if there was any default in payment would have to make it good.

The stamp duty in these days was not provided

from the loan at all but was paid for by the Board of Agriculture.

He was afraid he could not understand how the compensation to the outgoing tenant could be put on the 80-years system. In his county they put it on a 14-years scale, and the incoming tenant had to pay it off in that time.

The County Council appeared to him too sanguine in the amount set apart for management expenses and repairs, when they remembered that there were twenty-four cottages and small farms, and when they saw year in and year out only £136 7s. 11d. set apart for this purpose. He thought they were either very sanguine or very fortunate in their tenants.

In the Paper allusion was made to lectures on agriculture co-operation. In his county they were not so fortunate as to get fairly large estates to cut up—they had only 1,800 acres altogether, and that was spread over twenty-six parishes from one end of the county to the other, so that he was afraid lectures on co-operation would not be very much good. They had, however, lecturers going about the country giving instruction upon such subjects as the use of manures and feeding stuffs, in order to educate the small holders so that they would not be at the mercy of every person who came along and tried to sell them manures or food stuffs that were of little value. They also tried to instruct them in the best way of bringing poultry to market, and in other matters connected with their work.

They all had much to learn and could only learn by experience. Whatever steps they took to get the best possible tenants for their land they were bound to have some disappointments, but they could only hope and trust that such measures as the Small Holdings Act

would do something to stop the flow of the best of their countrymen into the towns. Possibly, when they could get the Board of Education to amend its curriculum in the country schools, and when the increased postal facilities, to which Mr. Cowper Coles had alluded and which had been foreshadowed by Mr. Samuels, had been carried out, something effective might be done in this direction.

They were indebted to the Cheshire County Council for giving them the opportunity of inspecting these small holdings and also to their friend Mr. McCracken for the able Paper he had given them on this very interesting subject.

Mr. COARD S. PAIN (Fellow) observed that in a little book upon the art of polite conversation he had once read, it was stated that persons should never talk upon a subject with which they were too well acquainted as they were likely, being so full of their subject, to bore those with whom they were engaged in conversation. As a member of the Wirrall Small Holdings Committee this advice might be applicable in his own case, but be that as it might, he desired to pay a tribute to the interesting character of Mr. McCracken's Paper. It was well expressed, and the interest well maintained throughout.

He would like to point out that it was the duty of members of a County Council to carry out the Acts of Parliament put into their hands without allowing feelings, political or otherwise, to interfere with the particular Act placed before them, and when the Ledsham Estate was offered for sale it at once occurred to the Wirrall sub-committee that this was one of those ideal properties that would enable them to play the game without risk. It would enable them to fulfil their duties in respect of the

Act itself, and in case of failure the estate would be a valuable asset. There was no doubt that in buying the 800 acres they hoped to be in the position of getting it at a price that would enable them to let it for small holdings at a reasonable rate, and in the event of the small holdings turning out a failure they could by cutting it up for residential properties save themselves loss. Of course, a further risk had to be taken in the selection of the tenants. Very few of them possessed large sums of money: generally speaking, £150 to £200 was about as much as any of them had, but here again the Cheshire Council had a great advantage over many other such bodies because there was less risk of the small man being swamped in bad seasons in the case of pasture land than would be the case if the land were arable.

A question had been raised by Mr. Dickson about the period of 80 years being granted for money loaned for tenants' compensation. Well, he thought he might explain that in this way. The compensation payable to the outgoing tenant was often so large that it was quite impossible for a man with a capital of £200 to meet it, and consequently it became part of the purchase money of the property they let to him. That, he thought, was a fair line to take in a case of that sort where one bought wholesale and sold retail because it was quite impossible for the small man to pay the compensation otherwise.

The difficulty as to the outgoing tenants' right to plough up pasture arose as follows. The estate, previously to the County Council acquiring it, had not been managed by a land agent and the tenants had done pretty well what they liked. The custom of the country enabled them to plough up a large amount of grass land for corn, from which crop they were entitled to benefit.

Mr. Dickson had remarked about the expenditure on repairs, &c., being on an extremely small scale, and when the Committee met Mr. Baines, the Small Holdings Commissioner, he discussed the question with him, and suggested that it was absolutely impossible for the property to be managed and the rents collected for the amount of money fixed, but of course one's judgment was sometimes overruled by stereotyped conditions with which they had to conform, and they were told that the amount must not exceed a certain percentage, and a certain percentage was put down on paper and had to be stuck to. At the same time it was only fair to say that as the extent of their liability increased with the additional areas that were being acquired, some two or three thousand acres, these establishment charges were being distributed in such a way that they would be able to fulfil the stereotyped conditions placed upon them.

There was one point he hoped gentlemen visiting the small holdings might have an opportunity of considering. He spoke of it rather as a personal matter, because when the designs for the buildings were placed before them he ventured to advocate the principle adopted by Mr. Lever at Port Sunlight, and by others, of providing one large living room instead of a small kitchen and a small parlour, which latter was only used on occasions of funerals and weddings, and for the display of anti-macassars and the family Bible at other times. Still it was represented by the farmers of the district that to do away with this would be wrong, and that women wanted the parlour. He still thought he was right, and hoped other gentlemen would give their experience as to whether one large room was not much better than two small ones. The smallholder was not a man brought up previously as a farmer, and was not subject to the

traditions as to what was necessary in this respect. He had come from a small cottage where he had probably had no parlour, and it was therefore no hardship to him to come into a house without one, especially as it contained a larger and better living room than he was accustomed to.

He thanked Mr. McCracken for the very able way in which he had put before them the history of Ledsham.

Mr. J. H. SABIN (Fellow) said they were greatly indebted to Mr. McCracken for his Paper, for it was an interesting example of what might be done with regard to small holdings, and left room for contemplation as to the possibilities of the future.

There were one or two practical points with regard to the erection of the buildings to which he desired to refer. He quite agreed with the last speaker that if possible the precious parlour should be eliminated, and if it were impossible to get rid of it altogether, then he would suggest making it very small. The parlour was not a necessity for a cottage, the living room was an absolute necessity, and he found that if the best room were just large enough for a table to carry a gramophone they had reached all that was necessary. In any case they could spread out of the best room or parlour into the kitchen, but they could not swell out of the kitchen into the parlour.

With regard to the paving of the cowhouses he noted they were of brick. Perhaps the inspector was not so particular about cowhouses in Cheshire as in some parts of the country, because brick paving was in many places prohibited, and concrete paving considered essential. Where the core for this material could be obtained at

moderate charges concrete paving laid by an experienced builder would make a much more satisfactory paving for cowhouses.

He presumed that the cost of the cottages was somewhat increased by the requirements of the Board of Agriculture or the Local Government Board, as he had recently put up excellent cottages in Cambridge on an estate of three hundred acres for the Co-operative Association at just under £400 a pair. Curiously, in that part of the district the wives did not desire a front room, and that enabled one to make a very superior dairy or pantry, which certainly added to the comfort and convenience of the house, although it might not be so important from the social side.

An advantage which they had in Ledsham, and it was certainly a very important one, was that they had the water laid on. Water was sometimes a matter of the greatest difficulty in connection with small holdings, and in the fen country, where it was almost an impossibility to get water from wells, it was often a very serious matter. In the case of the cottages he had mentioned he had provided outside a sunk cistern, but for the house and scullery he had placed two galvanised iron tanks of the largest size the scullery roof would permit and run the water into these from whence it was taken by pipes and tap over the sink and he found that that was a great boon and added much to the comfort of the housewife, who could draw the water in the house instead of having to go outside to draw the water necessary for culinary purposes.

There was one request he would like to make. Would it be possible for Mr. McCracken to add to the table on page 592 not only the rents receivable but the net rents, because he imagined the rents receivable

must include tithe, land tax, &c., otherwise they came out somewhat heavily, $4\frac{1}{2}$ to 5 per cent., so that he presumed that was gross and that there were considerable deductions to be made to indicate the actual net rentals.

He also had made a note of the provision as to repairs, but on consulting the table on page 585 he found that £137 6s. 11d. was the particular amount which made up the exact sum total of income £2,047 10s. 6d., and he presumed that that was the explanation of the particular item for management expenses and repairs. The garment in this case was cut to the cloth.

There was no doubt a future for small holdings, but it must be where small holdings were to a great extent indigenous. He was satisfied from his own experience that small holdings could not be created on "four-horse" plough land, which could only be let at £1 an acre. The rent of such land, with equipment, would work out at some 35s. an acre, and would put a clog on the small holder that would keep him down. He was not certain that he did not save a risky experiment in a certain case of this kind by fixing a little more as the price of the land than the County Council thought they could afford.

Where small holdings existed as in parts of Cambridgeshire, Lincoln, and Cheshire, he was sure they were going to prosper if properly managed, though he was not sure there was more safety on pasture than arable, for the small holder might lose all his cows, in which case he would be practically ruined. Co-operation and small holdings must go together, and cows would have to be included in some scheme of insurance along with other risks.

The HON. E. G. STRUTT (Vice-President) said everything he had thought of saying had already been well said by previous speakers. As Mr. Sabin had said, it was essential that for small holdings to succeed they must be established in places where small holdings had already been successful, for if started in an entirely fresh district they found that people did not understand how to work them, but tried to farm them on the same principle as the big farmer, and the whole advantage of small holdings was thus lost.

Knowledge as to the method of working a small holding was absolutely necessary, and it was equally essential that the small holder should be put on the best land. It was impossible for him to succeed on bad land. On poor land the cost of the necessary improvements, the buildings and equipment soon raised to too high a figure the rent necessary to provide interest on the capital invested, whereas £10 or £20 an acre might be spent for this purpose on good land without raising the rent too high.

There was a great deal in what Mr. Cowper Coles had said as to the tenant purchasing his holding for the Council, and he agreed with him that there would be dissatisfaction amongst the tenants when they realised that they were doing so. In the case of a County Council of which he had some knowledge, he found that the present tenants of the small holdings, if they continued to pay the rent they were now paying, would in forty years' time have paid enough to purchase their holdings, assuming the loan was at the rate of $3\frac{1}{2}$ per cent. This was chiefly owing to the greater cost of management for conducting small holdings. This would not include repairs, but he could not help thinking that if the tenants of these

County Council small holdings were offered to-day the opportunity of becoming the owners by paying the same rent for forty years they would very readily take on the burden of the repairs. The matter ought to be given serious consideration, because the time would arrive when there would be great dissatisfaction amongst the tenants. Most people agreed that the magic of ownership would do good in the country. He thanked Mr. McCracken for the excellent Paper he had read them, in which he had put before them a concrete case of small holdings in such an able manner.

Mr. M. T. BAINES (Fellow) said he should not have intervened in the debate had not Mr. Pain mentioned his name critically perhaps, and the criticism was received, very properly he thought, with some derision. He did not complain of that, because if the criticism were just, he would have deserved their laughter. They would recall that that criticism was evoked at the sum stated to have been fixed at £137 6s. 11*d.* for repairs and management, and he felt in justice to himself and his Board that he ought to state the facts, what the position was, and how the figure was arrived at.

When the Ledsham estate was purchased an estimate of expenses was formed and sent up to the Board of Agriculture for their approval. All the figures were worked out on the bases of purchase-money paid and the contracts entered into for buildings and equipment, and the scheme was sanctioned accordingly.

When all this had been done a claim of £1,000 for compensation for improvements, &c., was presented to the County Council and the Board, a claim that was unknown of when the original scheme was sanctioned. In addition the County Council found they would have to

spend a considerable amount more in connection with adaptation and equipment than they anticipated in the first instance. The question was asked by the Board as to whether the rents could be raised to a sufficient amount to cover these extra charges. The reply of the County Council was, "No, it cannot be done; the rents have been fixed; they cannot be raised to the specific extent necessary to meet such annual repayment for compensation." In the original scheme adequate provision had been made for repairs and management, and it was almost double the amount—£137 6s. 11d.—given in the Paper. That figure became what it was now owing, to a very large extent, to those extra charges.

When the amended scheme was sent up to the Board of Agriculture he had to deal with the matter, and he knew therefore what occurred, and if the clerk of the County Council had been present at that Meeting he would have assured them that never before had he had so many letters from a Government department as he had in relation to this question of repairs and management before he (the speaker) could recommend his Board to sanction the scheme in its present form. It was only owing to the fact that most of the buildings and adaptations were new, and that consequently no considerable amount of repairs would be required for the first five or six years, during which time the County Council could make a sort of reserve fund to deal with the repairs when they did become necessary, and also to the fact that the estate possessed growing timber, which when it became ripe could be turned into money either by being used for estate purposes or sold, and the proceeds applied to the reduction of the loan, that after considerable hesitation he recommended his Board to sanction the amended scheme. That

was what he believed was the true history of the amended scheme. He only mentioned the matter because Mr. Pain had said the Council had to comply with a stereotyped figure for repairs. But that figure was not the maximum percentage figure that was fixed. On the contrary it was the minimum that was fixed. In the case of such property it was understood that the amount for repairs and management should not be less than 15 per cent. on the gross rentals. It might, however, be more if desired. He was much obliged to them for listening to him upon what he might call a vindication of his own action.

It would be improper for him to criticise the Paper as he was responsible in some way for the scheme with which it dealt. The Paper, however, had one omission which, at all events, he could rectify, and that was the omission of any mention of the great part which Mr. McCracken had himself taken, not only in the development of that scheme, but also in all the schemes the Cheshire County Council had put through. To his position of vice-chairman he had added the ripe experience that entitled him to tender to his Committee that sound advice that had helped materially himself and the officers of his Board when they had been down to sanction schemes for small holdings.

It was owing very much to Mr. McCracken's own work that Cheshire was one of the most forward of the counties at the present moment in the development of small holdings under the Act, and although Mr. Leycester had done an enormous amount of work he did not think that he had had the practical experience of Mr. McCracken, his vice-chairman.

Mr. Pain had said that in Cheshire the position was easy and the land was good; unfortunately, however,

there was a keen demand for land on the borders of North Cheshire from opulent gentlemen in South Lancashire towns who wished to retire and to purchase small residential estates. Although land in Cheshire was being offered every day, it was extremely difficult for the County Council to acquire it, and although they had acquired some 2,500 acres, they had inspected and endeavoured to get some 7,000 acres. Though all the suitable attributes for small holdings were there in the land it was difficult to get hold of it at such a price as would enable the County Council to adapt and equip it at rents that applicants could afford to pay.

Mr. H. T. HINCKS (Fellow) agreed with previous speakers that everything in Cheshire tended to make small holdings successful, a state of affairs which they did not have in other counties.

As was the case with Mr. Dickson, he also had great difficulty in understanding how the County Council were allowed to spread the repayment of the original tenants' compensation over a period of eighty years; they had now made a present to the incoming tenant of the tenant-right valuation, and it appeared to him that it would be very difficult indeed for the Council to alter this system in the future. He had himself endeavoured to meet a difficulty of the kind by paying the tenant-right compensation, and putting in the new agreement a clause that no valuation should be paid in that respect to the new tenant when leaving. On a case coming before an umpire, however, he decided that no agreement could take from the outgoing tenant his inalienable right to compensation, and that compensation should be paid him, he (the speaker) being therefore £59 out of pocket.

It would be the same with the County Council when there was a change of tenancy if the tenant gave notice of his outgoing claim for feeding-stuffs, manures, &c., and unless the County Council recouped themselves from the incoming tenant there would be a loss over every change of tenancy. That would make a material difference in respect of the expenses and management, and if that extra loss had its effect upon one of the most favourable of small holding districts in England, what would it be in others not so favourably placed.

He would also call attention to the fact that another thing against the small holding might be the seasons. They were not going to have a continuance of the good seasons of the past two years, they must take an average of both seasons and prices, and if an exceptional drought continued for two years the small holder might be on his beam ends, and the County Council would have to find him money or he would become bankrupt.

Mr. McCracken had read them a very able Paper, but he thought he had taken a too roseate view of small holdings as a whole.

The PRESIDENT said they were all obliged to Mr. McCracken for his interesting Paper, and they felt that a large amount of the success of the Cheshire County Council small holdings was due to him as deputy-chairman of the committee. He was sure they would cordially accord him the vote of thanks which had been proposed and seconded.

The vote of thanks having been carried unanimously,

Mr. MCCracken, in reply, said he was more than pleased at the way in which the Members had received

his Paper, and he was exceedingly glad that it had elicited such a good discussion.

He had had considerable diffidence in preparing the Paper, and he felt grateful for the most kind and indulgent manner in which they had received his account of the first considerable purchase of land for small holdings.

Most of the questions asked had already been answered in the discussion, and there was therefore not much left for him to say. One of the points raised was that the small holder was buying the estate for the Cheshire County Council, but he would remind them that the County Council supplied the credit for the money borrowed, and no individual small holder could borrow on such terms. At the same time he was quite alive to the relevancy of the observations which had been made, and he did not attempt to answer the criticism further than by saying that they had to carry out the law as it stood.

He was greatly interested to hear Mr. Dickson's remarks on the buildings, because Mr. Pain and himself had recommended considerable modifications in the plans, but only a few alterations were found practicable owing to the extreme urgency of the work.

Mr. Pain questioned the desirability of having a "parlour," but he (Mr. Pain) would remember that the question was finally settled by the doctors upon the committee who strongly advocated its retention, not so much as a sitting room as a room available for an emergency bedroom.

Mr. Sabin doubted the advisability of using brick for the cowshed floors, but the material in use at Ledsham with a partially vitrified surface, which was capable of resisting the attacks of acids formed during the decay of vegetable matter even better than concrete.

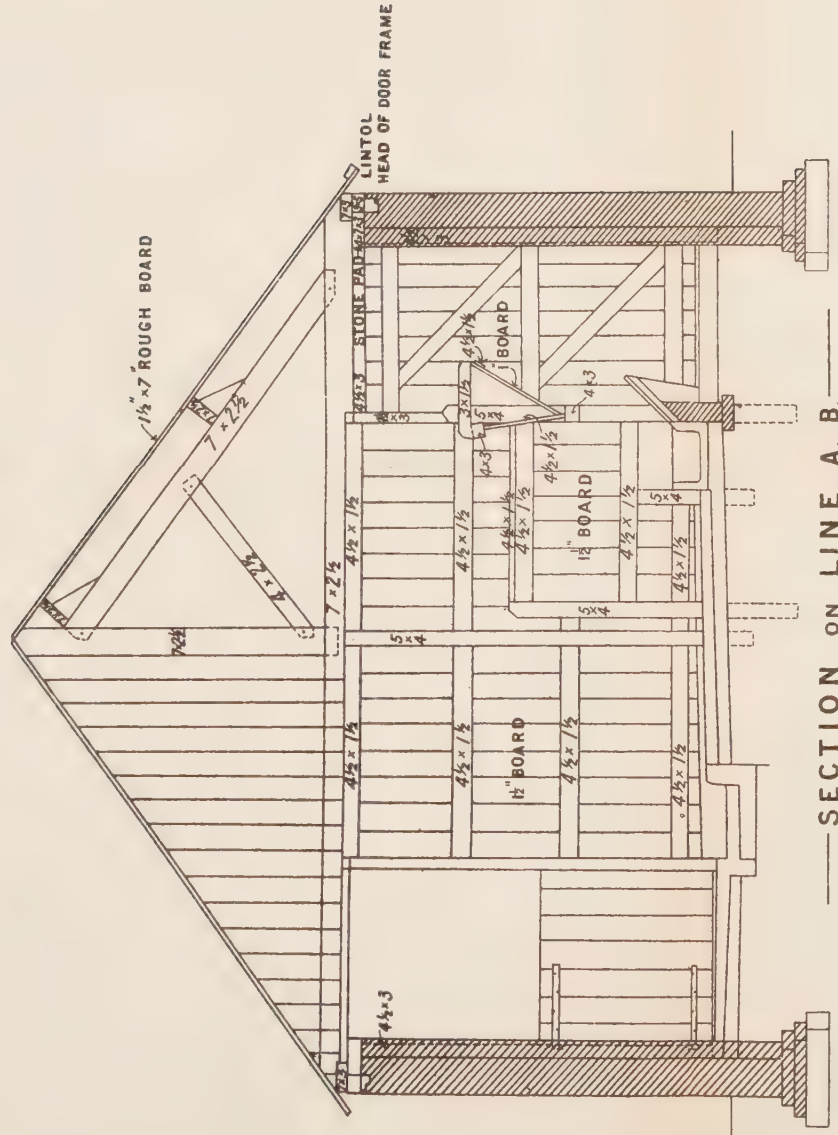
With regard to water supply they were specially fortunate in Cheshire as their water mains extended over large tracts of the rural district areas. That arose out of their great needs, so much of the water in Cheshire being brackish that pure water had to be brought long distances. Cheshire was unlike most counties in that respect, for in that county they would find mile after mile of mains supplying every farm and cottage on their way.

As Mr. Sabin had pointed out, the position of the small holder if an epidemic broke out amongst his cattle was most serious, and some system of insurance was much needed. The question of live stock insurance was of such vital importance to small holders in view of the risks they ran of loss from tuberculosis, contagious abortion, and anthrax, that he commended Mr. Sabin's remarks to the consideration of Mr. Baines and the Board of Agriculture and Fisheries.

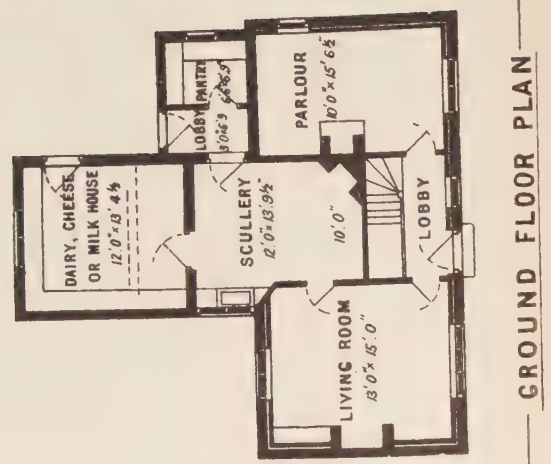
As to the Ledsham shooting, its value was due in a great measure to the existence of a small plantation which formed a breeding ground and covert for game.

He wished again to express his hearty thanks for the kind reception accorded to his Paper.

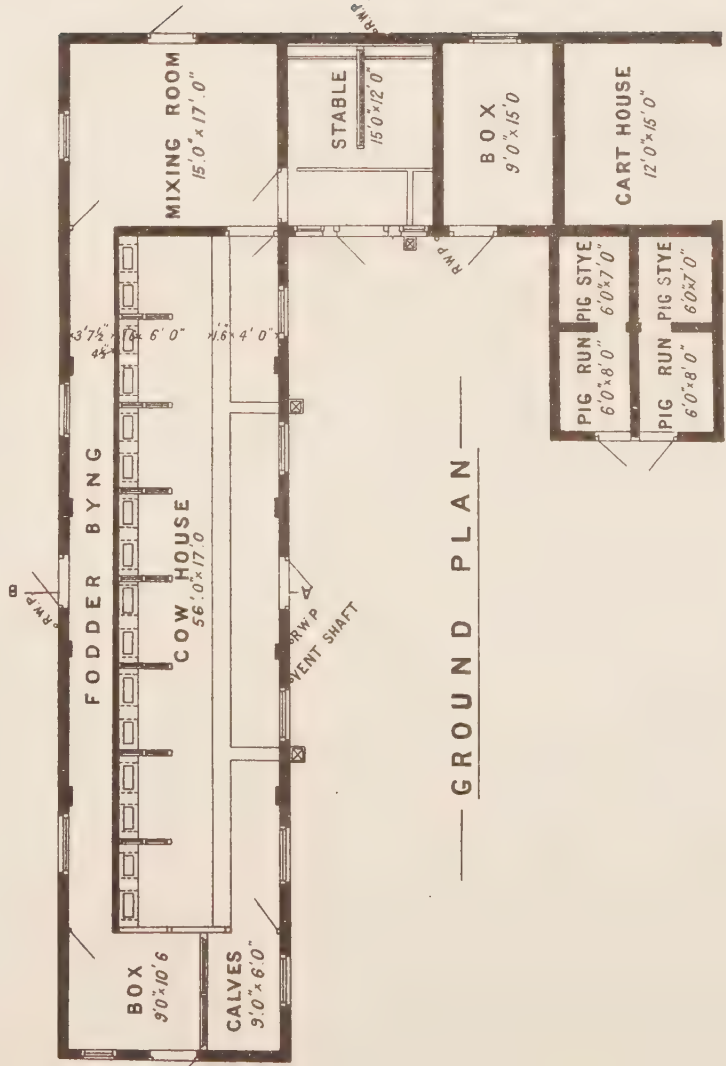
The Meeting then adjourned.



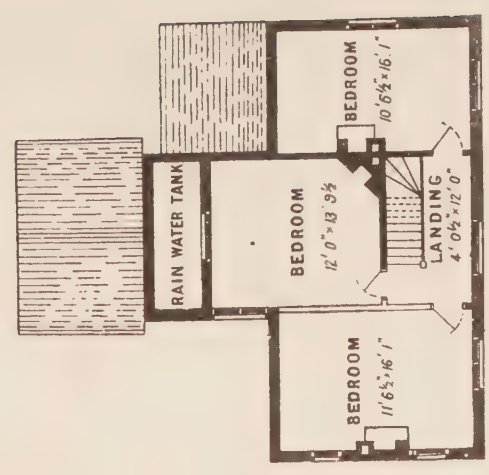
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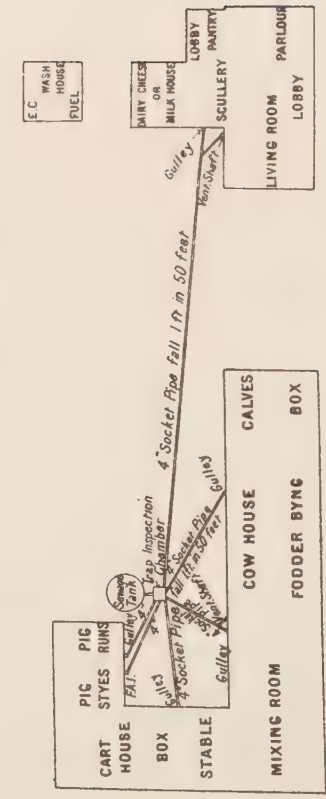
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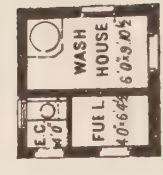
GROUND PLAN



FIRST FLOOR PLAN



BLOCK PLAN



GROUND PLAN

THE POSITION OF TENANTS ON THE DEATH OF AN OWNER OR THE SALE OF AN ESTATE.

BY J. HENRY SABIN (FELLOW).

*Read at a Special Meeting of THE SURVEYORS' INSTITUTION on
Monday, 19th June, 1911.*

W. EDGAR HORNE, M.P. (President) in the Chair.

To land agents who passed through the experiences of 1879 and succeeding years, when notice to quit from tenants was the rule, and landowners were glad to find solvent tenants to remain on farms, or others to take farms that insolvent tenants had resigned, there is something paradoxical in the proposal, made within a generation, that tenants should receive compensation for disturbance by a notice to quit given in the ordinary course of estate management.

It is, however, true that now the tenant not the owner is in fear. Thirty years ago fixity of tenure, although discussed, was not supposed to be within the range of practical politics, nor was there any large desire in England for leases. Indeed, half a year's notice was sometimes asked for as giving the shortest opportunity of escaping from a possible burden. The

desire of a high-class farmer was to secure adequate compensation for outlay of which he could not reap the benefit before leaving, and not for fixity of tenure or lengthened notice. Tenants in England did not aspire to joint ownership, nor desire fixity of tenure at the risk of themselves being fixed.

In the frequent discussions that have arisen on Agricultural Holdings Acts of recent years, which have included in their provisions the extension of a notice to a twelvemonth except with the absolute consent of both parties, the demand has been primarily for an enlargement of the schedule of improvements for which the owner's consent is unnecessary, for release from conditions on which they could be made, and for freedom of cropping.

With the partial, I cannot say complete, recovery from the depression of the latter part of the last century, there has naturally been a fear—or an expectation—on the part of tenants that owners would seek a reasonable share of the advance in values. Synchronising with this expectation there have come two other movements; a demand for land for small holdings stimulated by legislation, and a very modified panic among owners induced by a fear of taxation.

Anticipating possible displacements from these causes, and influenced by one or two cases of alleged hardship, Parliament in the 1906 Act provided that in certain circumstances and subject to certain conditions a tenant might claim compensation "for the loss or expense directly attributable to his quitting in connection with the sale or removal of his household goods," and so on. The condition precedent is that the notice to quit must have been given without good and sufficient cause and for reasons inconsistent with good estate management.

The notice of an intention to claim must be made within two months of receiving the notice to quit.

It is quite evident that many causes would come within the definitions set out, but any injury suffered by the tenant would not depend upon the cause for which the notice was given but upon the notice itself.

In the interesting discussion which arose on Mr. Aubrey Spencer's Paper five years ago it was agreed that the provision of small holdings must necessarily be consistent with good management, since Parliament had expressly encouraged the taking of land for this purpose against the wills of both owner and tenant, and it was also suggested that a sale of an estate could not be deemed, *ipso facto*, bad management. To be more consistent in its legislation Parliament last Session passed the Small Holdings Act, 1910. It is not denied that the provision of small holdings complies with the condition of the older statute as to good estate management, but it is nevertheless provided that the tenant shall be entitled to compensation on similar grounds where the notice is given by, or at the request of, a county council. The Legislature has been further unusually consistent in providing that money required through the State's interference with a contract shall be forthcoming from State funds. Political economy having been banished to the planet Saturn, or elsewhere, arguments have been found justifying the payment of one class of tradesmen at the expense of the community, and so assisting into business small holders of land and not small dealers in grocery or boots.

It is worth noticing that the claim under this Act may be made after the notice to quit has expired, and without other notice. The condition under the old Act that the notice of making a claim must be given two

months after receiving notice to quit has, I am satisfied, led to unfortunate results. Last year's Act merely ensures that the council shall have a reasonable opportunity of making a valuation.

DISTURBANCE ON SALES.

Whether it be that owners, unwilling themselves to increase rents, prefer to pass on the invidious task to others, or that necessity compels sales of estates, the result to tenants who relied upon old connections and associations for a security which has induced high farming and improved land, may be equally unfortunate as in the case of disturbance for small holdings, and it is not therefore altogether surprising that a claim should be advanced for some method of compensation for such disturbance when it follows the death of an owner or a sale. There has thus been raised an appeal for protection from what had been considered an ordinary incident of farming, namely, the return to the lender at his will of the land borrowed for the purpose of trade. It is not compensation for the capital invested which cannot be immediately realised by an outgoing tenant, nor, as yet, a claim for goodwill, but practically damages for the non-continuance of a business at a particular place, although such compensation may not improbably be extended to cover a loss of goodwill.

That loss must be caused by "removal" is undeniable. Hitherto the loss inseparable from a change of tenancy has usually fallen upon both parties. Such incidents can seldom or never occur without outlay by the owner, while no tenant can change homes without expense.

Has the time arrived when the tenant can justly claim more than his tenant-right, and, if so, who should

pay him? It is this problem which is put for solution to the Departmental Committee now sitting under the chairmanship of Lord Haversham, and before which three of our Members have given evidence. What is the "position of the tenant farmers of England and Wales on the occasion of any change in the ownership of their holdings, whether by reason of the death of the landlord, the sale of the land, or otherwise?"

The subject lends itself to widely divergent views. It may be urged that the trade of farming must be carried on with the same risks as other businesses, and that no interference with the ordinary rights of owners is justifiable. But we must admit that the position of the farmer recently has materially altered and is still altering from year to year. Farming is more scientifically conducted and more specialised, and when an intelligent system is brought into practice in the education of our rural population, scientific and specialised methods will be the rule. Soils are now treated as raw materials of infinite variety and almost unknown possibilities, and we seem to be only on the threshold of discoveries as to their capacity for more specialised treatment still. An interesting article by Professor Wrightson in a recent number of *The Agricultural Gazette* has an important bearing on this aspect of farming operations. The electric treatment of crops, and the experiments in wheat culture, may lead to a necessity for making the position of the farmer more secure if experience is to be gained, although it may have to be accomplished without trenching upon the rights of ownership.

It is obvious that the results of disturbance must vary with the character of the farm, of the farmer, and of the terms of holding. We may give a sympathetic reference in passing to sentimental aspects of the ques-

tion, but you cannot compensate a family for the pain of leaving an old home full of cherished memories to which probably the mother and the children will attach more importance than the sterner parent. Then the position of a tenant carrying on the simple business of corn growing and a little cattle dealing is not to be compared with that of a man who has acquired a reputation for stock raised in a particular district, or has developed a dairy business with retail connections in a town, or who has a long-standing contract, or secured a connection of buyers of poultry, eggs, fruit, &c. This last class of farming should be encouraged, and the success of any scheme which brings producer and buyer together must have the element of continuity at the seller's end to make it successful.

On the other hand it must be conceded that many occupiers whose tenancies started in times of depression now sit at rents that are below not merely competitive, but fair market, values. It is not unreasonable to consider such tenants when under notice as occupying a different position from men who have had a bare reduction to present times values only. Owners who have let at low rents on a falling market should not be precluded from securing the advantages of a rising market. If, as I fear is sometimes the case, sales are being resorted to rather than a revision of rents, I think it is to be regretted. A bolder course of revising rents if imperatively necessary, and a determination to face possible future taxation which a moderate revision would provide for, would be preferable, and would leave many tenants undisturbed in their homes.

I need not further refer to the possibility of disturbance for small holdings, although this question is covered by the word "otherwise" in the reference, and

the quickening of the pace which is hoped for is likely to lead to a growing claim on the Small Holding Account. We turn to the two specific causes of change on which the Departmental Committee is asked to report.

Except in the case of tenants for life, and particularly of incumbents of livings, the death of an owner need not alter the position of an occupier. It is not customary for the successor to an estate to terminate tenancies except where there has been obvious mismanagement, or where rents are abnormally inadequate. Even then there may be agreement, and a failure to agree to reasonable terms would indicate an incompatibility of temper that should render separation desirable rather than otherwise. No tenant can farm with satisfaction to himself who is on bad terms with his landlord; the relations between the two are too close to render this possible. An Incumbent very rarely evicts his predecessor's tenant. He is allowed to sit out his emblements year, and then goes on as a matter of course. Tenants of glebe land are sometimes nervous as to their position, and glebe farms are not cultivated in the best way, but changes are not so frequent as to be likely to give rise to claims in any number. A glebe tenant knows the uncertainty, and discounts it.

The position of tenants on an estate offered for sale, however, gives rise to important considerations. Such an event may be looked at with trepidation by occupiers who may have farmed highly feeling confident that they would not be moved. No hard-and-fast scale of compensation can be suggested even if the right to any be conceded. A retired farmer in the course of conversation on the subject bluntly refused to consider that any damages or compensation should be given to a man who had farmed badly, and yet this

is the class of man who would fare most hardly on receiving notice. A good tenant might be welcomed on another estate. The only case in which I had a personal part in such disturbance so resulted. A man whose character for farming was unsatisfactory, or whose personal qualification was doubtful, though tolerated as an old tenant, might find great difficulty in securing another farm to experiment upon. Or take the case of a man to whom large concessions had been made on his entry, who sat at a low rent, and who had thereby made profits that in a measure already compensated him. What should be done in his case? Clearly *if* compensation or relief in any form is to be given the whole circumstances of each case must be open to investigation.

STATE ASSISTANCE BY LOANS.

I think I may assume that in no such cases will payment by the State be conceded in any form. Notwithstanding the suggestion that what has been done for Irish landowners and tenants may be equally well done for British, I think I am safe in saying that any Government that proposed appropriations for British agriculturists or owners would sign its own death warrant. Some other and cheaper scheme so far as the State is concerned must be devised. It is one of the disadvantages of legislation by Englishmen on Irish subjects that there is a reflex action upon English opinion in circumstances and under conditions that are in no way comparable. But so much of the Irish scheme of land purchase as provides for the advance of money may be the simple solution in some instances. If an owner decides to sell a tenant might be assisted to buy, the

State lending its credit, borrowing on the favourable terms it can always command, and charging the borrower at a rate not more than he would have to pay a private mortgagee, but which would as between State and purchaser provide a redemption or sinking fund. I need not discuss figures or give examples. Or if the State did not act directly, it is suggested that it might well do so through a land credit bank or some similar institution.

The arguments for occupying ownership are well known and have been ably advanced in this room, but they will not apply to all cases of disturbance such as we are now considering. Why should a man be compelled to buy as a way of escape when he may have no desire to impose the burden of ownership on his successors or his family? I am satisfied that a desire to purchase is not only by no means general, but is present in a small proportion of cases. A farmer well known among Lincolnshire breeders, while writing that "to some men a sale of their farms may be a godsend and to others the ruin of all their hopes of prosperity," agrees that the remedy that would do the most good would be for the State to lend money at a low rate of interest to *good farmers*, but admits further that discrimination should be made as to the ability of the purchaser. Another occupier who himself owns land, in the course of conversation on the subject, said, "I would rather have my £1,000 to speculate in stock than locked up in land," and another practical man who is now anticipating the inconvenience of a sale, writes unsolicitedly, "I think tenants, as a rule, do not care to buy land, it locks up too much money. They would rather occupy and use their money in their business." So Dr. Robert Farquharson, a Scottish landowner, writes recently,

“ Land purchase will hang round the farmer’s neck the
“ millstone of his initial outlay, cripple his resources, and
“ leave him helpless and undefended when bad times
“ come.” A widow with a young family left as occupying owner might well regret the day her husband risked his free cash in the payment of the margin on a State loan.

Again, the proportion of any State advance must necessarily be high if the scheme is to be of any real assistance, and few land agents have been so fortunate as not to see a large margin in the value of a farm disappear under reckless management, or under such a change of character as sometimes occurs through the stress of a special calamity.

Should, however, a purchase-assistance scheme be suggested as one remedy, it ought to be strictly confined to actual occupiers. Speculators for a rise would have to be carefully guarded against. The purchase should be by public auction or at a certified value. The Ecclesiastical Commissioners some years ago sold some of their detached and outlying farms to tenants on instalment methods, spreading the payments over thirty or thirty-five years on annuities calculated at £3 $\frac{5}{8}$ or £3 $\frac{1}{2}$ per cent., and accepting a deposit of 20 per cent. Many tenants in Wales and in the southern counties bought on these terms, but fewer in the eastern and midland counties. In some cases the ownership was promptly transferred to others, and although to this there could be no valid objection on the part of private vendors, there would be serious objections were State credit taken advantage of. In no cases were the sales forced upon the tenants by threats to sell to others. Safeguards would have to be introduced into any scheme of State assistance which would effectually prevent its abuse.

So also the purchase by farmers themselves of their neighbours' farm would have to be prevented—men are not always so altruistic as to be able to resist such temptation if it showed possibility of profit. The scheme might stop the doubtful speculation in land which has recently arisen, because a speculator would expect a larger return than an occupying owner, but it would be fatal to a successful issue if the method were artificially encouraged so as generally to convert occupation into ownership. The strain on national credit would be too great, and I am persuaded the result to the farming interest would be disastrous. Ownership under ideal conditions may be good, but a nation of comparatively small owning occupiers would not be to the good of the country.

A method which will no doubt find advocates will be simply to cut out the controlling words from Section 11 of the Act and throw upon the owner the burden of compensation. Who then would be the owner in the case of a sale? It would hardly be fair to throw upon purchasers who had given high prices for land the burden of a liability created by an act of the vendor. But on the one hand it is well known that it is more difficult to effect a sale with tenants not under notice, and on the other that purchasers would heavily discount an unknown risk. Yet it would lead to a serious delay were any claim to compensation permitted to outrun the completion of the transaction.

In such a case as was reported the other week, when thirty-five and forty years' purchase was given for farms, it would—assuming the facts to be as stated—only be reasonable that the vendor, if anyone, should pay, but in other cases where speculators have bought at low prices with the intention of re-selling at a profit the

intermediate owners are the persons on whom the burden of compensation should fall. Frankly, so many variable factors must be taken into account that I despair of any satisfactory solution, and I am persuaded that nothing but a Land Court could settle the conflicting interests, but a Land Court is one of those establishments from which may we long be delivered in England. I have omitted references to many elements that would arise, including the possibility of a tenant greatly improving his position by changing and so gaining instead of losing.

I am, in consequence of these difficulties, moved to make two suggestions, the simplest of which I will put forward first.

I am surprised to find that many tenants are still farming voluntarily under half a year's notice. To such tenants a notice to quit on a sale may be almost a calamity. To uproot a home and find a new one under present conditions in six months is almost impossible. A year is none too long. I suggest that in cases of sales the time should be extended to two years. Such length of notice is permitted on many estates and is the custom on one property under my management in Sussex, giving a sense of security that leads to very high-class cultivation. It would give an advantage to a tenant that would be of the greatest value while he was seeking another occupation.

I know all the arguments that might be advanced against the proposal, particularly that it would afford a long period in which to "farm for leaving." But I would make it an essential condition that the owner should be protected against exhausted land by an initiatory right to claim for dilapidations and bad conditioned land, and against an inflated tenant-right by an extension of the

period over which an expenditure for feeding stuffs and manures should be averaged. It might also be a condition that the course of husbandry suitable for the land or customary in the district should have been followed for the two years.

I would further provide that the purchaser should have the absolute right to determine the tenancy if he were in possession by the completion of the purchase at the end of the first year, he then becoming liable to compensate the tenant for the consequence of the disturbance a year in advance of the expiration of the two years' notice. I am the more satisfied that a threatened tenant would accept such extension of notice since one to whom I have already referred, a good practical farmer, writes, "a two years' notice would help us a nice bit, it would give us a better chance to get somewhere else." I may add that this opinion was elicited in the course of a request for farms for two sons who had been served with half a year's notice on a projected sale.

CO-OPERATION.

The second suggestion I have to make for meeting the difficulty I should hesitate to commend were it not that the great, almost invincible, objection which British farmers have evinced to any form of mutual assistance seems to be breaking down. Even up to the present day farmers have been encouraged to depend upon exterior aids. Protection, reciprocity, fair trade, tariff reform, Agricultural Holdings Acts, Pure Beer Bills, and other helps more or less useful in raising prices, or creating confidence, or monopolies, have been hoped for, and in some cases secured, but farmers are only now learning that while waiting, and perhaps hoping, to

obtain some yet unsecured boon, there are remedies at hand that should not be neglected.

The Irish farmer and the small holder are showing the way. Co-operation hitherto has been almost *tabooed* in the agricultural world, and it is refreshing to know that there are already co-operative dairies and cheese factories for the disposal of produce, following co-operative purchasing concerns, and that now we are to have co-operative bacon-curing, albeit we have to import the method, and, I believe, the manager.

I cannot bring myself to admit that a farmer needs greater protection from the State in the transfer of his business than any other tradesman or professional man, nor can I see why a man who does *not* want to buy his farm for occupation should have as his only remedy the opportunity to purchase. As a general principle a tenant wants independence, not relief. It is a serious thing to start a wholesale State department for setting men up in business who are capable of looking after their own affairs so well as are most English farmers. The argument for their assistance might well be extended to other businesses. What difficulties, that a strong council or committee could not overcome, would there be in forming a farmers' "compensation for disturbance" fund on broad mutual or co-operative principles? Such a scheme might well be launched by a farmers' union or by the Central Chamber of Agriculture as a subsidiary object and organisation, and would, I believe, be a means of rallying to the membership of the Central Chamber and its county divisions practical men who now hold aloof on the ground that their proceedings are either too academic, or in touch not with the practical farmer's needs but with the interests of the seed and manure merchant.

Such a fund would be managed by business men in an infinitely better way than by any Government department that it could be trusted to.

Members would subscribe either in proportion to the area occupied at per acre, or in proportion to their rent, and being on strictly mutual lines, any excess of contributions could be allotted to some other mutually helpful purpose. Having regard to the extraordinary risks freely undertaken by the association so well known as "Lloyds," is it not possible that the difficulties which at first sight appear formidable might be overcome, and a mutual method of insurance against disturbance be thus provided? A very small premium would, I am satisfied, suffice. The present vogue of "Breaking up estates" is an epidemic that will exhaust itself. The eviction of a tenant is a good headline for a newspaper paragraph, but while I know such cases occur and create hardships for which a remedy may well be sought, they are not so numerous as to have become a scandal or to have created widespread distress.

There are roundly thirty-two millions of acres of cultivated land in Great Britain held by an estimated number of over half a million tenants of more than an acre each. The rateable value, as defined by the Agricultural Rates Act, 1896, for rural land, is stated to be say £20,500,000. It is not possible to say forthwith what amount would be required to meet claims that might be made within any twelvemonth, but returns could be obtained and the necessary risk calculated. Many vendors have given facilities to their tenants to buy on easy terms, as on the Thorney Estate, and such cases would be eliminated.

Deducting mountain and heath land and the area in the occupation of owners, we have a balance of, say,

twenty-eight million acres held by tenants, with an estimated rateable value, exclusive of houses, after making a deduction for land occupied by owners, of about £17,500,000. If only one-fourth of the occupiers contributed to a mutual insurance fund at the rate of *one-half per cent.* on the rateable value *excluding their houses*, equivalent to *less than one penny per acre*, a fund of over £20,000 would be provided. If the insurance and unemployment Bill becomes law, farmers will have to provide much more than this to secure their labourers from unemployment; they would surely provide against their own "out of work" risk at this nominal rate.

If the Central Chamber of Agriculture or the county branches could not undertake the scheme, it might be associated with the proposed credit banks. Local committees could make inquiries into the circumstances; they would be acquainted with the condition in which the farms were left and with the injury likely to be inflicted by removal, and would be equally inclined on the one hand to do justice to the man aggrieved lest they themselves should come under the same adverse condition, and to the members of the association as interested themselves in the amount awarded. An appeal to a central committee might be allowed. The scheme would have the happy effect of binding together the whole farming interest in a manner hitherto unattained and might lead to the development of co-operative efforts in other directions also.

If the Agricultural Organisation Society could add to the excellent work it has already done the advocacy of a co-operative association for mutual protection on the lines thus roughly sketched it would be conferring an unbounded benefit on British farmers. Those who refused to join might be left to take the risk.

It may be urged that if owners were satisfied that tenants could thus insure themselves they would show less reluctance in giving notice, but we cannot by any scheme provide for every moral or immoral motive; a provision for purchase would or might be similarly abused.

I have enough experience of landowners to know that as a rule they desire to keep their estates and their best tenants. Another generation will grow up without fear of Chancellors of the Exchequer, and, for the sake of all the happy amenities of English country life, will hold their land. Moreover, if general regulations and legislature covering general interests are necessary, the less owners and tenants are fettered by State control or State aid in their individual holdings the better for all parties.

It will be a public misfortune if farm tenants look to a paternal State for assistance instead of making the necessary provision out of their own resources, and preserving to themselves "the glorious privilege of being independent."

Colonel G. W. RAIKES (Fellow) said it was with great pleasure he rose to move a cordial vote of thanks to Mr. Sabin for his excellent Paper, which they would all agree showed great mental grasp of a most difficult subject, and which had been put before them in a most masterly manner.

It was not the first time he and Mr. Sabin had crossed swords in that room, and though he might have to criticise a few of the points raised in the Paper, there was much in it with which he cordially agreed. The suggestion of two years' notice to quit, with certain qualifications, he considered the most practical solution

of the difficulty which so far had been put forward. The Report of the Departmental Committee was not yet published—perhaps Mr. Sabin was “in the know,” and this pronouncement was semi-official or a sort of ballon d’essai to see which way the wind blew at The Surveyors’ Institution. However that might be, there were four remedies suggested by Mr. Sabin and others for the alleged injustice to tenant farmers when given notice to quit their holdings on account of sale: 1st, Purchase by tenants with State assistance; 2nd, Compensation; 3rd, Co-operative insurance; and 4th, Two years’ notice instead of one.

Before discussing them in the order named he would like to say a few words as to the cause of so many farms being sold. The Farmers’ Club in their excellent report on the subject said: “That for causes which are “apparent to all owners are selling with the effect that “tenants are receiving notices to quit for purposes of “sale.” It was, perhaps, rather unfortunate that the committee of the Farmers’ Club was so reluctant to call a spade a spade and to state distinctly what those causes were, which were so apparent to everybody. Two of the principal members of the Government had stated in Parliament and elsewhere that the chief cause was the boom in agriculture and the consequent desire to acquire farm lands. Probably that was not the reason which the selling landowners would give themselves. Mr. Sabin had told them that there was a great demand for land for small holdings stimulated by legislation, and a very moderate panic among owners induced by a fear of taxation. Those were very gentle words—did they go far enough? He was afraid it was not a modified panic or a fear of taxation—it was the realised conviction that the income tax and the super tax, and the other new charges now

being levied, and the certain prospect of the death duty in due course spelt ruin to all large agricultural landed proprietors who had no other means of existence. Land was being sold in all directions in order to clear off mortgages and if possible to provide some other source of income less cruelly taxed. The landlords knew it only too well. The tenant farmers who were getting notices knew it, and the Farmers' Club report said, "It is apparent to all."

So far as he knew there was no boom in agriculture. It was true that farms were far more easily let now than 10 years ago, and consequently were more saleable, but there was no boom. If they cast back their recollection to 30 years ago they would remember that farms sold readily at from 30 to 40 years' purchase on a rent which often was 50 per cent. more than it was to-day. When they talked about a boom, he would like to tell them that less than two years ago he had sold a farm to the tenant at what was then considered a fair price, 28 years' purchase, and that brought about £5,600. He would undertake to say that 30 years ago that farm would have made £10,000. Where was the boom?

It was very desirable that when farms were sold the sitting tenant should not be unnecessarily disturbed, but unfortunately the tenants who were most likely to be disturbed were those who were most easily circumstanced as to rent and who were therefore the most reluctant to make a change. This was doubly unfortunate, because their farms when sold separately were certain to make a price representing more years' purchase than others which were held at something like rack-rents.

The Farmers' Club suggested State assistance, and had published a very interesting table showing what

margin by way of sinking fund there would be if interest were paid on the purchase money at the rate of $3\frac{1}{2}$ per cent. instead of existing rents. That table was worked out on what could be done with £1,000 borrowed at $3\frac{1}{2}$ per cent. if laid out on a scale of purchase at from 20 to 28 years.

To quote three examples: (1) If a farm rented at £50 could be bought for £1,000, or at 20 years' purchase, and the interest was £35, *i.e.*, $3\frac{1}{2}$ per cent., *and there were no other outgoings*, there would be a margin of £15 per annum in favour of the tenant who, according to accountants' tables, would pay for the farm in 35 years; (2) Again, £1,000 at 25 years' purchase, represented a rental of £40, and a saving of £5 per annum, which under the same conditions would pay for the farm in 60 years; (3) 28 years' purchase represented a rental of £36, and a saving of £1 per annum, which would pay for the farm in about 250 years if there were no repairs done upon it.

Mr. Jesse Collings was the great advocate of State assistance to purchase, but neither he nor any of his supporters, or even the Farmers' Club, seemed to have seriously considered the great difficulty of repairs. Landlords had been in the habit of spending from 10 to 20 per cent. of their rentals in that way; he did not believe that any tenant would do all his own repairs in a satisfactory manner, and subject, say, to a quinquennial inspection by a responsible and qualified surveyor, for less than 10 per cent. of the rent; and if they did not have an inspection and a certificate what sort of reasonable security could the Government have for lending their money. To take, then, a hypothetical case of a farm rented at £200, in fair order, bought at 25 years' purchase for

£5,000 with money borrowed at $3\frac{1}{2}$ per cent., the interest came to £175; cost of repairs £20 = £195, leaving a margin of £5 per annum as a sinking fund to pay off £5,000!

Of course it must be said there were two or three other items to be taken into account. The sporting rights for the first time would probably become the tenant's property and he would be able to let them, but if he got money out of that it would no more than cover the new sporting rate and the cost of insurance of the buildings, and if he had enough income the Schedule A income tax.

He had endeavoured to show that the cost of repairs would break down any scheme of purchase with borrowed money at $3\frac{1}{2}$ per cent. unless the tenant was prepared to make a considerable annual payment out of his own pocket by way of sinking fund; and that Mr. Jesse Collings' suggestion that the annual payment of interest and sinking fund would be less than the old rent was entirely illusory, and but few tenants would wish to purchase on any less advantageous terms.

The next remedy was compensation, the complications and difficulties of which were most ably dealt with in Mr. Sabin's Paper. Farmers did not ask for compensation; they did not want to be disturbed; and if any compensation were legally recoverable from the old landlord it should only be on very sound evidence that the price received for the farm had been partly due to the skill and industry of the sitting tenant and that he had not already recompensed himself through the lowness of his rent. Mr. Sabin suggested that landlords prefer to sell than to raise rents. He thought they did, and with good reason. Nothing was so difficult as to raise tenants' rents; in fact, it was difficult enough even

to cancel any allowance that had been temporarily granted.

Coming to mutual insurance or co-operation, he thought that would be the best plan of all if the farmers could be induced to take it up. But were they likely to? He was afraid only those would join the insurance organisation who felt insecure in their holdings and it would therefore kill itself. Perhaps if the State contributed, and one more drop of blood was squeezed out of the landlords as the landlords' contribution, it might be made compulsory; but that would be most objectionable. If such an association were formed by farmers on mutual lines on a voluntary basis, he should be very sorry to have to collect the subscriptions. He had had to do with the working of a farmers' society, and good fellows as they were, and straightforward enough when they had a matter of definite business to carry out, there was nothing so difficult as to squeeze a sovereign out of a British farmer by way of a subscription.

To make it obligatory to give two years' notice to quit when a sale was contemplated was the last and best remedy, the tenant being compelled to crop and cultivate his farm during the two years according to his agreement or the custom of the country, instead of for one year, after receiving notice to quit. He thought Mr. Sabin's further suggestion both practicable and reasonable, viz., that the purchaser of the farm should have power to take possession and turn out the tenant at the end of the first year's notice if he had paid all the purchase money, but that he should be liable to pay the tenant compensation by arbitration for being disturbed a year before his time. If two years' notice were obligatory in case of sale many of the landlords would not give notice

at all, and the old tenants would often continue undisturbed, and if they were disturbed eventually their differences would have to be settled with the new landlord instead of the old one.

Mr. Sabin had spoken of the land courts ; he agreed with him in the hope that they might long be delivered from one in England.

It should never be forgotten that when the Government was lending money to assist any class a security was wanted, and oddly enough the security in Ireland was very much greater than it was in England, because the tenant farmers in Ireland had already bought their houses and practically everything on the farm except the land itself, and a man in that position was far less likely to leave the Government in the lurch than if they were lending the whole of the purchase money for the buildings and everything on the farm.

There was a charming ingenuousness about Mr. Sabin's peroration, he said : " Another generation will grow up " without fear of Chancellors of the Exchequer, and, for " the sake of all the amenities of English country life, " will hold their land." He envied Mr. Sabin those kindly trustful ideas ; but perhaps they were more suitable for a young girl going to her first ball than for hard-headed men of business who saw what was going on around them. He begged to move a very cordial vote of thanks to Mr. Sabin for his valuable and very interesting Paper.

Mr. E. A. RAWLENCE (Fellow) said he had very much pleasure in seconding the vote of thanks. Mr. Sabin had given them a most able and exhaustive treatise on the subject, and had dealt with it in an extremely fair-minded manner. He could not agree

with everything put forward, but he thought Mr. Sabin had dealt with a difficult question on fair broad-minded principles.

He personally failed to see why agricultural tenants should be dealt with on a different principle to those which prevailed amongst other classes of the community, as, for instance, tradesmen or professional men who had just as much to lose by disturbance as tenant farmers. Where were they to draw the line? Mr. Sabin had recognised the difficulty in his Paper. Compensation for disturbance practically led to fixity of tenure, and that would lead to their getting into the terrible condition in which the Irish tenants were in recent times—might God deliver them from getting into that position. He considered it would be nothing short of criminality if the happy conditions which now existed between the landlords and tenants in this country were allowed to get into such a position. Unfortunately by the Act of 1906 the ball had been set rolling, and one was puzzled to know how or where it could be stopped.

Mr. Sabin admitted that political economy had been banished to Saturn; he thought its course had been downwards rather than upwards. He considered the present trouble had all arisen from the Finance Act of 1910, which undoubtedly forced an undue quantity of land into the market under conditions which were entirely different to those which obtained years ago. Formerly the large estate was in a ring fence and was an attraction; now that was not the case. The large financier who bought for speculation or residence was scared, and the only way to sell land now was by cutting up an estate into small areas; the smaller apparently the better. Obviously that necessitated serving notice to quit on the tenant. If a farm were cut up into three or

four lots they were practically bound to give possession to the purchasers. That, in his view, was the cause of all the trouble they had to face. In olden times one never thought of serving notices to quit when a sale took place; the ownership simply passed on, the same tenants continuing. They were however forced to meet new conditions. Certainly there was a hardship, especially in the case of Michaelmas tenants, where they had to serve them with notices on a sale which was to take place in May, June, or July ensuing; a tenant did not know who would be his new landlord until within three months of the expiration of his notice, and had to make up his mind to quit altogether, or take the risk of being turned out practically at three months' notice. That was the difficulty created, and they had to meet it fairly.

With regard to the remedies suggested by Mr. Sabin he had had the honour of giving evidence before the Departmental Committee in May last, and curiously enough had suggested precisely the same remedy, namely, that where the notice had been given the tenant should have an option within a specified time to give a counter notice, so that the twelve months' notice should be turned into a two years' notice; and also if it were necessary for the vendor or purchaser to obtain possession either should have power to refuse to accept that counter notice but thereby would make himself liable to pay compensation for disturbance. But he made a further suggestion—that the compensation should be curtailed to a sum not exceeding half a year's rent, or some such fixed amount.

He felt that the mode of assessing compensation under the Act was a most costly and objectionable one because claims (he would not say fraudulent but very

difficult for a landlord to check) might be put forward under the present Act. He knew of a claim where an enquiry was now being instituted on the ground that it was fraudulent. He thought if the amount payable were restricted to a fixed portion of rent, half a year in most cases would probably be sufficient, and in such cases it would lead to a settlement instead of the complicated arbitrations which resulted from the Act, as the landlord would say: "Take your half-year's rent and " have done with it."

Mr. Sabin's second suggestion was ingenious but he did not think it workable. The only way it could possibly be worked was by making it compulsory, and that of course they could not do. Mr. Sabin apparently reckoned that 25 per cent. of the tenants might avail themselves of it. He felt certain that the tenants who would cry out most for compensation would be the very ones who had failed to avail themselves of the insurance. The remedy must be one that would at any rate include the great bulk of the tenancies.

Then again, Mr. Sabin had referred to tenants near towns who had established a retail business for their goods and had a trade which disturbance would destroy. How were they to distinguish between the trading part which was not liable to compensation for disturbance and the purely agricultural part which was? It was a most complicated question. He did not see how it could be better dealt with than by the suggestion which had been made to extend the notice to quit, which would meet both sides of the question and would give the tenant time to look about and find another farm.

Mr. Sabin had referred to the schemes worked by the Ecclesiastical Commissioners, and he would be glad to know whether those schemes were working satis-

factorily and whether the instalments were being paid up. He had great pleasure in seconding the vote of thanks to Mr. Sabin for his very useful Paper.

The SECRETARY then read the following resolution passed at a meeting of the Leicestershire, Northamptonshire, and Rutland Provincial Committee:—

Resolved.—That in view of the fact that legislation granting tenants compensation for unreasonable disturbance has been so recently passed, the Committee are of the opinion that at present it is not advisable to legislate further on the subject, but recommend that the Government should advance money at a low rate of interest with proper safeguards to the tenants to enable them to buy their holdings. The Committee being of the opinion that such a course would greatly help the tenants.

Mr. JOHN LOOKER (Fellow) cordially endorsed the remarks which had been made as to the great value of Mr. Sabin's Paper, which had gone comprehensively over the whole ground and had treated some awkward subjects very delicately. If he could find a fault in it it was that there was nothing to criticise, and that it would not promote a very lengthy discussion. Any remarks he could make would be only putting in other words the views which Mr. Sabin had advanced.

He must base his observations upon the obligations thrown upon landlords by the Agricultural Holdings Act which established a principle of State interference with contracts. Having regard to the compensation for disturbance allowed under the 1908 Act, the problem they were discussing might be reduced into these words: Has the time arrived when the tenant can justly claim

more than the present tenant-right, and, if so, who should pay him ?

The Agricultural Holdings Act of 1908 emphasised the rights of one party to the contract, but it also brought into prominence the equal rights of the other party. By that he meant that where the law said that one contracting party, the tenant, should have compensation for unexhausted improvements, when those unexhausted improvements were being assessed the arbitrators or valuers said, "If we are to deal with the rights of one party to the contract we must also deal with those of the other party"; and through that had sprung up a desire in agricultural valuations to do full justice to the conditions of a contract. When he was younger agricultural valuations were all on one side; there was no such thing as a dilapidation claim, but since the rights of one party had been put forward by the Government commonsense had very justly caused the rights of the other party to be remembered.

The Government in its wisdom had set up a Departmental Committee to deal with the position of tenants on the death of an owner or the sale of an estate; and they might rightly assume therefore that it was considered that the present compensation for disturbance claims was inadequate; otherwise there would be no necessity for the Committee now sitting. They might further assume that eventually there would be an extension of the tenant's claim for disturbance—in plain words, they would give him some degree of "fixity of tenure," or at least a right to claim some sort of "goodwill." In other words they would give every tenant a vested interest in the fee simple of the land. Unless the State, that is the taxpayer, bore the cost of conversion, the loss must fall on the owner in possession

when the change in the law was made. It was obvious that a prospective purchaser would discount this liability as an "outgoing," and would offer a price accordingly.

Mr. Sabin asked, "Can the tenant *justly* claim more than his tenant-right?" That was, in other words, "Can one party to the contract ask the State to interfere on his behalf either at the expense of the other party to the contract or at the expense of the State?" Mr. Sabin also said the Legislature had been consistent in refusing to provide money for the State interference with the contract, and he went on to say that "any Government that proposed appropriation for British agriculturists or owners would sign its own death warrant." If that conclusion were correct the loss must fall on the owner. The State dare not, or, at any rate, would hesitate to undertake it. But was that so? Would the Government hesitate to interfere in a contract? He very much doubted it. He firmly believed that the Government would not hesitate a moment, firstly, to interfere in any contract, and secondly, to give one party to the contract an advantage over the other party, provided always (as the lawyers said) the party helped was numerically the larger, and exercised greater voting power. That, to his mind, was the crux of the whole question.

With regard to this agitation, if it could be so called, for further compensation for disturbance, could any Member in the room say there was a general desire on the part of tenants to have the law altered in their favour in that respect? He agreed with Mr. Sabin that there was no universal or general hardship existing at the present time between landlords and tenants which called for any interference on the part of the State. Was it not, like most other agitations, brought about by

one or two extreme instances worked by politicians for their own purposes?

Just a word on the suggested remedies. Mr. Sabin's first remedy was for the State to advance money to enable tenants to purchase. Those who understood farming knew very well that farming was the most speculative business one could possibly engage in, because the tenant's capital must of necessity be tied up in the farm for some time; he could not as in other speculations cut this loss and throw up the whole thing at once. That being so, could any prudent tenant be advised to take upon himself the risk of purchase? In a long experience of the inevitable fluctuations which from time to time occurred in the value of agricultural land, he had seen more purchasing tenants brought to ruin through this than any other cause. The last piece of work he did before leaving the country to come up for the Meeting was to advise a tenant as to whether he should rent another farm or buy his present holding. He asked the tenant a few questions, and when the answers were tabulated and put before him he said, "No, thank you. I will not take the risk." One question which he put to any one who thought of becoming the owner of his farm was, "What age are you?" "40." "Can you guarantee that you will live long enough to carry this through in a reasonable time? If not, are you prepared to leave your wife and family to carry on the farm, or to get somebody else to manage it for them?" "No, I would not leave my wife in such a position." He said, "Then do not buy."

He cordially agreed with the opinion of Dr. Robert Farquharson, quoted by Mr. Sabin, which put into focus all the best opinions on the subject: "Land purchase

“will hang round a farmer’s neck the millstone of his initial outlay, cripple his resources, and leave him helpless and undefended when bad times come.” A word had been said as to the safeguards which the State should adopt in order to keep the tenant the continuous owner and prevent him alienating the land when he got it. He was at a loss to know how they could make the occupying owner guarantee to keep the farm in his own family for any length of time. He knew what was happening in his own neighbourhood. A generous owner did not want his tenants to be turned out, he offered them the option of purchase on very reasonable terms: they took it and were very grateful; but 25 per cent. of them showed their gratitude by at once selling at an enhanced price. Whether the tenant became owner by money borrowed from a private individual, or from the State, it was impossible to provide any safeguard whereby he should be made to carry out what was supposed to be the very essence of this scheme—continuity of tenure.

Another remedy was co-operation with a view to insurance by tenants against loss by disturbance. To carry that out it was suggested that the tenant should by some form of insurance, out of his own pocket, provide the remedy, in the same way as the brewers provided compensation for an abandoned licence. But if they did so surely that was admitting that the burden should not rightly fall on the State or on the owner, but on the tenants. In other words, the party who, according to the dictum they were having impressed on them day by day, was the sufferer, that is, the tenant was to provide his own remedy.

If that was the right conclusion they might dismiss State aid and owner’s liability and confine themselves to

the tenant's position. He did not gather from Mr. Sabin's figures whether he suggested that a fund of £20,000 would be raised annually or not, probably he meant an annual fund, and it looked a large sum to deal with; but he agreed with Colonel Raikes that it would be difficult to get any large or sufficient number of tenants to come into such an insurance fund, and with Mr. Rawlence, who further pointed out that the very man who would be the claimant eventually would be the last man to come in. He was afraid there would be found no disposition on the part of the tenant to contribute to this fund. There would be a tendency to put off the payment of a premium until there was in each individual case a chance that notice to quit might be served.

The other remedy suggested was a two years' notice, which he assumed meant that the Agricultural Holdings Act must be altered from one year to two years' notice. He agreed that of the remedies proposed that would be the least harmful, but he did not think, assuming that a remedy was necessary, it would have a very great effect. It would not greatly interfere with the landlord: there were many landlords now who gave two years' notice, and where the one year's notice clause was in operation the owners frequently actually gave the tenant nearly twenty-four months, if not legal notice, at least notice that he would have to leave. The extension of the notice to two years must and would, to some extent, depreciate the property which was being offered for sale by the seller only being able to give possession in two years. The tenant, however, would have more time to get another farm, and it would, to some extent, satisfy sentiment.

Mr. Sabin had also compared contracts in land with contracts in other things — he mentioned boots and

grocery. They must all admit that in all contracts, whether for the use of any commodity, goods, money, or land, they must of necessity make provision for determination. There must be an end for all time contracts, whether it was a seven days' bill or a ninety-nine years' lease, and it was evident that the determination must and did frequently cause loss and inconvenience to one party to the contract. But whether the State would exercise the power which it possessed to intervene in the one case and not in the other entirely depended, he thought, not upon the abstract justice of the case, but upon the political exigences prevailing at the moment. Mr. Sabin had rightly said it would be a public misfortune if farm tenants looked to a paternal State for assistance. It would be more than a misfortune if the owners of land in this country were to suffer undeserved loss from the fact that they were of little account as factors in party conflicts.

Mr. J. J. DONE (Fellow) said that everything he had intended to say had been already so ably said by other speakers that he had very little to add. If he might respectfully say so, he thought Mr. Sabin's Paper was a model of what a Paper of that kind should be. The whole of the time they were skating upon thin ice—they were dealing with a social and political subject—and he could only congratulate Mr. Sabin on the excellent way in which he had left every one in doubt as to what his political opinions were.

As Members of The Institution they ought to regard themselves as the servants of the public; they were "handy-men," and they had to carry out loyally and to the best of their abilities whatever might be the system

of land ownership and occupation which the exigencies of politics or statesmanship required.

Although they were servants in that they were not supposed to criticise their masters, at the same time, without having much acquaintance with the servants' hall, he believed it was not unusual in such a place for pungent criticism to be bestowed on those who gave the orders. He was not going to indulge in that kind of thing, but he must make a protest against Mr. Sabin's diagnosis when he stated that owners were at present suffering from mild hysteria and a modified panic, suggesting that if the patient had a little rest, quietness, and change of Chancellors, all would be right. He did not think it was a case of mild hysteria at all. They might just as well look the facts in the face, and what they saw was that landowners, occupiers, and, incidentally, land agents were at the present time between the upper and the nether millstones of two conflicting ideals—the ideal of private ownership of land and the ideal of State ownership of land. Those two ideals were at the present time being dealt with on other platforms than the present one, and it was difficult to say what the result would be. He was sure there was sufficient practical ability in their Institution to settle very easily such a difficulty as they were dealing with that night if they only had a clear lead from their masters as to whether it was to be State ownership or private ownership. He supposed, however, it was hopeless to expect that they would get any such clear lead. The probability was they would muddle along to some solution, and he supposed the only thing they could do was to keep putting on pieces of plaster here and there just as the eruption showed itself.

Several plasters had been suggested. He also could

suggest a remedy for the whole of the trouble, and he did it without the slightest hesitation, because he knew there was not the slightest chance of it being adopted. Give the owner reasonable security that he would be dealt with fairly and honestly in legislation, and the whole of the difficulty would disappear to-morrow. There was, however, no possible chance of any such happy issue coming about, and therefore what they had to do was to take the facts as they found them and make the best of what was unquestionably a bad job.

As far as the discussion had gone that evening, it was at any rate evident that the united wisdom of their Institution could only suggest one thing—a two years' notice to quit. Speaking as a land agent who was more interested in landowners than tenants, he had no objection to offer to the proposal. It was confined properly to cases of sales of estates, and that being so he did not see any reason why it should not be adopted. That it was going to ameliorate the difficulties of the situation to any great extent he doubted. The remedy of sale to the tenants was hopeless; the remedy of co-operation was equally hopeless: and, as far as he could see, the only suggestion that wiser men than himself had made was the only one that was open—that was, to accept a two years' notice to quit.

MR. E. SAVILL (Fellow) said he could not agree with the view expressed by Mr. Done that Members of The Institution could not discuss those questions because they had not got a lead. Why, because the questions happened to be political, were they debarred from discussing them? Were they to allow their clients the landowners to be ruined without pointing out where present legislation was taking them? Surely the

Members of The Institution were the people to give the lead. Their clients could not tell them what to do in those matters, because they did not know what was going on, and to say they could not discuss the question because it was political seemed to him to be ridiculous.

Mr. Sabin had made a suggestion which required very earnest consideration. There was one remedy which he had not mentioned, and which was perhaps the most obvious—the improvement of the trade of agriculture. He thought until that was effected every other remedy must prove illusory. If agriculture were a good trade, with more or less certain profit, no difficulty whatever would arise on the owner desiring to sell his farm; the tenant would be able and only too ready to purchase it. But as things were at present he dare not take the risk—he felt that it was unsafe for him to venture to stand alone. In those cases where the tenant had purchased, he believed it was entirely against his inclination. From what experience he had had he felt quite sure that tenants did not want leases: they did not want to buy; and they did not want any more Acts of Parliament. What they did want both for themselves and for the owners was to be left alone.

Mr. MARK JEANS (Fellow) said he had listened with the greatest interest to the Paper and the remarks that had been made. He had not come with the intention of speaking, but they appeared to have missed one point which in his opinion was the crux of the whole matter. The landlords had been smarting very much under recent legislation, which was likely to cripple them in a great many ways, and had, not unnaturally, come to the conclusion that the best way out of their difficulties was to realise their property. That had been done to a con-

siderable extent, and to the surprise of everybody land had been selling at very much better prices than it was expected to sell at.

Something had been said about a boom in farming. They could hardly call it a boom yet; but those who were engaged in letting farms knew that if they had a farm to let instead of having one or no applicants for it they got from twenty to fifty applications. That meant, whether farming was improved or whether it was not, there were plenty of men in the market ready to take farms and give more rent for them. It was, however, very noticeable in recent large sales of land where farms had been divided and estates cut up, that very frequently one farm would make forty years' purchase on the rental and a farm adjoining would make less than twenty years' purchase. The reason was this, that one man had rented his farm at a price altogether below the market value and had been enjoying that benefit for many years. Such men were very ready to talk of the hardship of disturbance, and to appeal to the Chancellor of the Exchequer saying that by the action the landlords were taking in selling their estates they were being deprived of their tenant-rights and unfairly dealt with. But was that so? He said, No, those were the very men who had been already enjoying benefits for many years to which they were scarcely entitled.

The good old-fashioned noblemen and owners of property who were obliged to reduce their rents some twenty years ago to a very low rate had never been able or perhaps willing to raise those rents again. Public opinion would doubtless have been against them, and they felt that there their tenants were, and so long as the old tenant liked to go on they would not raise

the rent. But when a man died or the farm came into the market that difficulty disappeared, and every landlord was taking that course now.

If the farm came into the market tenants came forward who were prepared to pay from 10 to 25 per cent. more than the farm was making before. That had been going on for a few years, and on every estate there were now a certain number of men who were thus paying the actual value of their farms, whilst the other tenants were still paying a very low rent, and in his opinion they were unfairly benefited as compared with their neighbours. The latter were the men who were now grumbling and talking about compensation for being disturbed.

The landlord having made up his mind that he did not mean to raise the rent to his old tenant, the only alternative for him, so as to be able to do justice to himself and his family, and perhaps his mortgagee, was to put his estate into the market and realise its full market value—that was to say, the number of years' purchase on which the tenant was paying his rent and the extra number of years' purchase which the property was worth. It seemed to him that that had come to the knowledge of the Chancellor of the Exchequer, who had said: "Instead of doing those men a bad turn I have been doing them a very good turn; they are getting out of their dilemma, they are putting their money in their pocket, investing it in other ways, escaping from their difficulties, and putting the burden on the shoulders of other people with whom I shall be less able to deal." That seemed to him to be the crux of the whole question.

Without intruding further on the Meeting he would merely say that he entirely agreed with what had fallen

from Colonel Raikes, Mr. Rawlence, and other gentlemen who had spoken—that the only thing for them as a body to do, if any remedy were required at all, and if any recommendation were to come from them, was to suggest that instead of one year's notice there should be two years' notice. He thought that was amply sufficient to meet every difficulty in the way of settling this question, which was not by any means such a vexed one as they were led to believe.

Mr. W. ANKER SIMMONS (Fellow) said that the present position of the land question had been undoubtedly brought about by recent legislation. At the same time one could not shut one's eyes to the fact that there had been a certain boom with regard to agricultural land during the last two or three years. He well remembered the period from 1870 to 1879 when land was worth a great deal more than it was to-day; he equally well remembered the disastrous period which followed, when they had for ten or fifteen years a great number of farms on their hands, and it was almost impossible to let or sell farms at any price. When they considered that, if they had a farm to let, they could now have ten to thirty applicants for it, he certainly thought they must agree that there was at the present time something of a "boom in land." In his opinion in the sale of land it was unwise to seek to interfere with the ordinary law of supply and demand. If there were a greater demand for land, naturally there would be a greater inclination on the part of people to buy. He thought the general feeling was that the less people were interfered with by legislation the happier they were likely to be.

With regard to their position as representing the surveyors of the country, he thought all they could do was to try and put their finger upon any actual point of hardship which it was possible to obviate in a reasonable and practical way.

The greatest hardship existing to-day was when a man was given notice to leave his farm because the estate was in the market. If notice were given, say, previous to a Michaelmas day, that the estate was to be put up for sale in the following spring or June, or even later, the tenant did not know what was going to happen, and it was that position of uncertainty for which they, as practical men, ought to try to suggest a remedy. He was quite in agreement with Mr. Sabin in suggesting they should advocate a two years' notice to quit in cases of that kind. One of the most practical men he ever had to do with—his father—was a great advocate of a two years' agreement, and he had in his own agencies a great number of two-yearly agreements. He had heard his father advise tenants over and over again that they were safer and better under a two years' agreement than they could be under any other form of holding.

At the present time he knew many men in possession of big farms with large capital invested who were under notice to quit as their farms were going to be put up for sale within the next month; some of these could not buy their farms, and were uncertain as to whether they would have to quit at Michaelmas or not. But in the present position of the land market, it would be extremely difficult for a tenant to get a farm between now and Michaelmas. It did not allow sufficient time, but if when farms were sold the tenants could be certain of another fifteen months' tenancy it would give them

the opportunity of taking a reasonable time to secure another farm. A two years' notice would provide this.

He believed when Lord Carrington introduced the question of compensation for disturbance, he had in his mind more particularly the cases of men who were likely to be affected on account of their farms being sold. At that period he had many conversations with Lord Carrington, who frequently said to him that if a man was turned out of his farm in order that the owner might obtain a better price, he thought that was a case where the tenant ought to have some compensation for disturbance. He (Mr. Simmons) was inclined to agree, but it was laid down in a well-known County Court case which had not been appealed against, and which he believed in law would be held to be correct, that the fact of selling an estate was within the limit of what was called "good estate management"; so that a man had no remedy for compensation for disturbance because the farm was going to be sold. If it could be laid down that the fact of the farm being sold should give the tenant a claim for compensation for disturbance where insufficient time to get another farm was allowed, then the hardship would be materially met.

With regard to the other remedy (insurance) suggested by Mr. Sabin he did not believe it was possible to carry it out. Reference had been made to its being somewhat equivalent to the position of the brewers who have to provide compensation for the loss of a licence. There was a great difference, as they would all readily see, between the two cases, because it would follow on the closing of a public-house there would be an interference with the law of supply and demand in favour of those who supplied, but there would be no such interference

with regard to farms, because the farm would not be shut up but still remain in competition with other land. From his knowledge of farmers he was quite certain it would be hopeless to think for a moment that they would get them voluntarily to agree to any such proposal as that put forward. Therefore of the two suggested remedies he agreed with those who had already spoken that the only practical one was a two years' agreement.

As to the proposal that the State should find money for tenants to purchase their holdings on reasonable terms, his private opinion was it would never be done. In the first place it would require an enormous sum of money, although as far as that went he did not think the State would actually have to find the money, because if it would guarantee the bonds the public would find the money. If they could have a State-guaranteed security of $3\frac{1}{2}$ per cent. for their capital he did not think there was any doubt that the public would find the money. But it was always forgotten in the statements put before the tenants as to the possibility of buying land on the basis of paying for it in a certain number of years, whether 35, or 50, or 60, at about the same amount they were now paying in rent, that if the Government gave this guarantee they must of necessity have a margin beyond the $3\frac{1}{2}$ per cent. of interest to provide against the many contingencies which only those who understood land ownership had any idea of. They need only remember the extraordinary drop in the price of land between 1820 and 1830, and also between 1870 and 1880 and 1880 and 1890; the latter represented an enormous capital sum which the tenants of this country, as a body, could not possibly have stood against as owners.

Generally speaking, land in this country had a value over and above—in many cases very much above—the

purely agricultural value; those who had bought land had bought it not only as an investment but also to give them something which only the acquisition of land could afford, and while the purchasers of land had been content in a great number of cases with a very small return of something like $1\frac{1}{2}$ or 2 per cent. for their capital, all that time agricultural tenants had been able to obtain the land at a reasonable rent on its purely agricultural basis of value; but if they were going to buy the land they would have to pay its full market value, and when they had paid the upkeep of repairs and all the charges that rest upon the land, and had met the many calls which were made upon those who possess it, they would find that instead of buying something which was worth $3\frac{1}{2}$ or 4 per cent. they were in possession of an investment which yielded a very poor return indeed. Unless a man could see his way when purchasing a farm to pay the old margin of one-third, he had better not be the owner at all. He would far rather see the man become the owner of the farm by paying the margin than become a State tenant under the conditions which would have to obtain if the State advanced the money.

As to providing against speculators, that might be done by the State only advancing to occupiers pledged to remain on the land for three, five, or seven years; but there were so many difficulties which arose the moment one began to take into consideration the possibility of the State finding the money for purchase, that he thought the wisest thing was to give up all idea of the State helping the tenant to buy. Moreover, it was directly against the current political aspect of the case, which was that the State was eventually to become the owner of all land in this country. The Chancellor of the Exchequer had

said in the plainest possible terms that land nationalisation must come. Therefore he did not see how it was likely that the Government who laid that down by its Chancellor of the Exchequer was likely to assist the tenants to find the money to enable them to become individual owners. It stood to reason they did not stand so good a chance of carrying their nationalizing scheme into operation with a large number of owners as with a small number.

As to whether it was advisable that a man should buy his farm or not must be left to the individual. As a general rule there was no desire on the part of the tenants to change their position from one of tenants to that of occupying owners, and his own impression was that even if there were a considerable change in that respect in the immediate future, before many years rolled by they would find the rich men in this country would again become the landowners, because of the advantages which the ownership of land would always offer; they would find that history would again repeat itself, and the yeoman farmers would go back to the position of tenants.

The vote of thanks having been put to the Meeting and carried unanimously,

Mr. SABIN said he thought it was exceedingly kind of those who had spoken to refer in such terms to his Paper. He ventured to suggest with great deference that if they would kindly read it again in the quietness of their studies they would find that he had anticipated many of their objections and had met many of the criticisms which had been offered. He had to start with this first principle. They were not to discuss the question as to how or why the present position of affairs

had arisen, but to inquire what remedy there was for certain evils which were due to causes in consequence of the present state of things, and he had endeavoured as far as possible to confine himself within that very narrow margin.

He ventured still to have the optimism of youth and to express that optimism in one or two sentences. He was going to hold that optimism even in spite of the pessimism of his friend Colonel Raikes, and he did believe that land would still be held for the sake of the amenities which were enjoyed by its owners.

He wanted to make this suggestion with regard to the terms of purchase. Of course farmers took it for granted that the rents they were paying were a fair factor in the value of their farms and proposed to buy at 20 years' purchase or 25 years, or at the most 28 years' purchase, and they very nicely regulated the amount of interest and the amount of purchase money accordingly. But he thought most of them would agree that a very large number of farmers were speaking without the slightest authority, and were very far from the truth in that idea. He could not imagine for one moment that many could buy their farms at 25 years' purchase; if they bought at all they would have to buy at present values, whatever they might be, and if the margin between the rent and the interest at which they could borrow on the present value of the farm was not sufficient to provide a sinking fund, then it was hopeless for them to think of buying. He was extremely grateful for the kind and patient hearing they had given him.

Mr. Rawlence had asked if we knew anything as to the success of the Ecclesiastical Commissioners' schemes. He knew that they had been successful, and in very

few instances indeed had the tenants failed to pay the regular instalments.

It was said that great minds frequently conceive the same ideas. He might say that he had not the slightest idea that Mr. Rawlence had given such evidence before the Commission—he certainly had derived no suggestion from the evidence given, no report of which had reached him.

The PRESIDENT said they could promise Mr. Sabin they would read his Paper again. He personally wished to congratulate him on giving them a most valuable Paper, and one that had induced so useful a discussion.

They must not lose sight of the fact that the annual value of a farm on a big estate was not expressed by the rent that was paid for it. That probably could be put down as being about two-thirds of its value. The one-third latent value was allowed to drop by the proprietor of the estate, partly because of the pride of ownership and partly because of the social prestige which up to the present time had always been associated with the ownership of an estate. When that estate got into the market that latent value was expressed in the sale price, and would for the future have to be paid by the purchaser who under the more business conditions which seemed likely to prevail in the future would endeavour to pass it on to the tenant's shoulders. There was just one other consideration. State loans would be a very easy way to lead on to State ownership.

THE ANNUAL GENERAL MEETING

Monday, 29th May, 1911.

LESLIE ROBERT VIGERS (President) in the Chair.

The Report of the Scrutineers, appointed at the Ordinary General Meeting of Monday, 8th May, 1911, under the provisions of Article XLII. of the By-Laws, was read to the Meeting.

The Report declared that the following were elected a

COUNCIL FOR THE ENSUING YEAR.

President.

W. EDGAR HORNE, M.P.

Vice-Presidents.

THE HON. EDWARD GERALD
STRUTT
JOHN FARRER

THOMAS BINNIE
W. EDWARD WOOLLEY

Members of Council.

HOWARD CHATFEILD CLARKE
EDWARD BLAKEWAY I'ANSON
JOHN GERMAN
GEORGE FRANCIS STEWART
FREDERICK GEORGE
CHINNOCK
HENRY W. D. THEOBALD
SAMUEL HOOD COWPER
COLES
ARTHUR LYON RYDE

HENRY HERBERT SMITH
JOHN HUBERT OAKLEY
ALFRED MICHELMORE
THOMAS SILK WILSON
JOHN HENRY HANSON
SIR ROBERT JAMES
THOMPSON
ANDREW YOUNG
JOHN WILLMOT

Professional Associates of Council.

CHARLES PELL HALL.
STANLEY HICKS.

Associates of Council.

THE RIGHT HONOURABLE LORD ALVERSTONE, G.C.M.G.
(Lord Chief Justice of England).
SIR JOHN WOLFE BARRY, K.C.B.

The Report of the Council on the affairs of The Institution, and the Statement of Receipts and Expenditure for the year 1910 were read.

IT WAS RESOLVED—"That the Report of the Council and the Balance Sheet be received and approved, and be printed and circulated with the *Transactions*."

IT WAS RESOLVED—"That the thanks of The Institution be given to Messrs. H. C. NEWMARCH and EDMUND HOWARD (in the absence of Mr. SCOBLE) for the efficient performance of their duties as Auditors, and that Mr. H. C. NEWMARCH and Mr. H. T. SCOBLE be requested to continue their services for the ensuing year."

IT WAS RESOLVED—"That the thanks of The Institution are due and be given to the President, Vice-Presidents, and the other Members and Associates of the Council, for the able manner in which they have administered the affairs of The Institution."

IT WAS RESOLVED—"That the thanks of The Institution be given to Mr. PERCIVALL CURREY (the Honorary Secretary), to Mr. ALEXANDER GODDARD (the Secretary), and the other Officers of The Institution, for the able manner in which they have executed their several duties."

THE PRESIDENT presented the following Prizes won by Candidates in the Professional and Preliminary Examinations, 1911:—

THE "PRELIMINARY PRIZE" OF THE VALUE
OF £2 2s.

to GEORGE W. COVER, for the highest number of marks in the Preliminary Examination, 1911.

THE "BEADEL" PRIZE OF THE VALUE OF £5

to CHARLES GORDON RENSHAW, for the best work in the subject "Agriculture" in the Intermediate Examination, 1911.

“THE INSTITUTION” PRIZE OF THE VALUE
OF £15 15s.

to LOUIS MICHAEL DELL, first of the Student Candidates in the Intermediate Examination, 1911.

THE SPECIAL PRIZE OF THE VALUE
OF £10 10s.

to THOMAS SIMPSON PATERSON, second on the pass list of the Student Candidates in the Intermediate Examination, 1911.

THE “PENFOLD” SILVER MEDAL

for the highest percentage of marks (over 75 % of the maximum) in the Students' and Non-Students' Divisions of the Intermediate Examination, 1911, to ERIC MORLEY, who also won

THE “DRIVER” PRIZE OF THE VALUE OF £15

for the highest marks gained by a Non-Student Candidate in the Intermediate Examination, 1911.

THE “PENFOLD” GOLD MEDAL

for the highest marks (over 75 % of the maximum) in the Final Examination, 1911, to CYRIL JOHN CLEMENTS.

THE "CRAWTER" PRIZE OF THE VALUE OF £10
to NORMAN COWELL for the best work in the subject
"Principles and Practice of Valuation" in the Final
Examination, 1911.

THE "GALSWORTHY" PRIZE OF THE VALUE
OF £15

awarded to the Candidate in the Final Examination,
who, having passed the previous Examination as a
Student, is found to have obtained the highest aggregate
of marks in the two Examinations combined, to
FRANK TREACHER TERRY.

THE "SCOTTISH COMMITTEE" PRIZE OF THE
VALUE OF £10 10s.

to JAMES D. BRAND for the best work in the Inter-
mediate Examination in Glasgow, 1911.

It was resolved—

"That the thanks of the Meeting be given to Messrs. W. T. CRESWELL, C. J. LAKE, R. B. MANN, J. H. MELLEFIELD, and GEOFFREY L. VIGERS, for their services as Scrutineers."

A vote of thanks to Mr. VIGERS for his conduct
in the chair was carried unanimously, and the pro-
ceedings then terminated.

THE FORTY-THIRD
ANNUAL REPORT OF THE COUNCIL.

Annual General Meeting, 29th May, 1911.

In accordance with the precedent of former years the Council introduce their Forty-Third Annual Report by bringing up to date the statistics of membership since the foundation of The Institution in 1869.

TABLE A.

	Honorary Members.	Fellows.	Professional Associates.	Associates.	Students.	Colonial Fellows.	Total.
May, 1909	26	1821	1876	76	385	45	4229
May, 1910	24	1862	1970	75	365	47	4343
May, 1911	26	1904	2105	73	338	54	4500
	+2	+42	+135	-2	-27	+7	+157

TABLE B.

	Members (or "Fellows" after 1881).	Associates.		Students.	Total.
		Professional.	Ordinary.		
May, 1869 ...	162	38		2	202
" 1870 ...	180	59		2	241
" 1871 ...	190	65		2	259
" 1872 ...	205	67		4	276
" 1873 ...	225	74		5	304
" 1874 ...	247	89		6	332
" 1875 ...	275	101		11	387
" 1876 ...	300	119		8	427
" 1877 ...	310	133		11	454
" 1878 ...	312	134		8	454
" 1879 ...	330	146		10	486
" 1880 ...	342	155		10	507
" *1881 ...	357	164		14	535
" 1882 ...	480	235		7	722
" 1883 ...	557	218	74	38	887
" 1884 ...	666	307	80	58	1121
" 1885 ...	703	317	86	86	1192
" 1886 ...	716	316	84	80	1196
" 1887 ...	741	339	89	108	1277
" 1888 ...	798	333	90	102	1323
" 1889 ...	910	334	89	110	1443
" 1890 ...	1095	310	89	123	1617
" 1891 ...	1374	336	96	140	1946
" 1892 ...	1646	342	97	172	2268
" 1893 ...	1629	353	93	181	2269
" 1894 ...	1626	381	84	204	2309
" 1895 ...	1629	430	83	210	2352
" 1896 ...	1802	465	86	220	2573
" 1897 ...	1808	540	84	252	2684
" 1898 ...	1835	615	85	272	2807
" 1899 ...	1887	686	84	308	2965
" 1900 ...	1883	757	88	336	3064
" 1901 ...	1883	834	89	364	3170
" 1902 ...	1891	906	86	392	3275
" 1903 ...	1897	1025	86	396	3404
" 1904 ...	1886	1140	80	409	3515
" 1905 ...	1893	1312	80	384	3669
" 1906 ...	1878	1502	74	361	3815
" 1907 ...	1832	1638	74	345	3889
" 1908 ...	1819	1786	77	350	4032
" 1909 ...	1821	1876	76	385	4158
" 1910 ...	1862	1970	75	365	4272
" 1911 ...	1904	2105	73	338	
Honorary Members ...					26
Colonial Fellows ...					54
1911 Grand Total...					4500

* Since August, 1881, "Members" have been designated "Fellows," and, in 1883, "Associates" were divided into "Ordinary" and "Professional" Associates.

The increase of 157 during the year brings the total membership to 4,500, and a glance at Table B is interesting in that it shows the growth of The Institution to have been steadily progressive since its foundation forty-three years ago.

An addition to the list of Honorary Members has been made by the election of Sir Herbert Hardy Cozens-Hardy, the Master of the Rolls, who is associated with the Lord Chief Justice and the President of The Institution on the Reference Committee established by Section 33 of the Finance (1909-10) Act, 1910; Sir John Eldon Bankes, who after being an Associate of The Institution for thirty years was elected an Honorary Member on being made a Judge of the King's Bench Division of the High Court; and Colonel Sir Duncan Johnston, K.C.M.G., C.B., R.E., late Director-General of the Ordnance Survey, whose invaluable experience has been at the disposal of the Council in connection with the conference with the Colonial Surveyors-General.

As The Institution increases in years and membership, gaps in our List of Members must unfortunately increase proportionately, and death has during the past year claimed toll among some of our oldest and most representative Members. The name of Elias Pitts Squarey is so well known in the profession that it is hard to realise that its honoured bearer passed the Presidential Chair of The Institution nearly twenty-three years ago; but years dealt lightly with him, and up till the end he took an active interest in the work of the great firm with which his name was for so long identified. An account of his professional career by a well-known pen will be found among the obituary notices, but the Council feel called upon expressly to acknowledge the debt which they feel that The Institu-

tion owes to him for his great personal interest and direction at a time when it was less strong and vigorous than is happily now the case.

Among others whose loss has to be mourned by the Council are His Honour Judge Philbrick, K.C., who had been connected with The Institution as an Associate for over forty years, and had acted as one of the legal examiners until compelled by ill health to give up that work two years ago; Mr. George James Brown, a Member for thirty years, and a generous supporter of the Benevolent Fund; Mr. G. H. B. Glasier (1876); Sir Henry M. Hawley, Bart. (1889); Mr. William Wynne Jeudwine (1883); Mr. James Barr, and Mr. C. S. Bathgate, well-known representatives of The Institution in Scotland; Mr. J. Stewart Kincaid, the first Irish Member of the Council; Mr. Philip Chenevix Trench, and Mr. H. de L. Willis, who will be remembered by many who attended the visit of The Institution to Dublin, and whose loss will be severely felt by their Irish confrères.

THE PANEL OF REFEREES.

The Reference Committee set up by the Finance Act of last year have nominated the following to act as referees for the purpose of hearing appeals under Part I. of that Act: Messrs. Charles Bidwell, H. W. Bruton, J. M. Clark, H. M. Cobb, J. G. Drew, J. Farrer, Thomas Jones, D. H. MacNicoll, Howard Martin, Sir A. R. Stenning, P. F. Tuckett, J. D. Wallis, and Daniel Watney.

The list is one which has inspired general confidence, and the Council note with satisfaction that all are Fellows of The Institution.

THE EXAMINATIONS, 1911.

During the year 905 candidates have presented themselves for The Institution Examinations, being 152 more than in 1910, and 180 more than the previous record in 1907. This great increase must be looked upon as to some extent of a temporary nature, the closing of the doors of membership after October, 1913,

TABLE D.

Years.	Preliminary Examinations.			Professional Examinations.		
	Candidates.	Passed	Percentage.	Candidates.	Passed.	Percentage.
1881	13	6	46·15	2	1	50·00
1882	30	17	56·66	—	—	—
1883	44	22	50·00	25	22	88·00
1884	51	30	58·82	36	23	63·89
1885	46	37	80·43	43	31	72·09
1886	46	34	78·26	56	38	67·85
1887	53	39	73·58	58	45	77·59
1888	48	39	81·25	73	52	71·23
1889	51	41	80·39	71	51	71·83
1890	53	44	83·01	96	70	72·91
1891	76	60	78·94	92	68	73·91
1892	83	64	77·10	125	93	74·40
1893	77	57	74·00	149	100	67·11
1894	97	66	68·00	182	129	70·87
1895	121	80	66·11	196	141	71·93
1896	117	78	68·37	212	143	67·45
1897	133	91	68·42	236	151	63·97
1898	127	95	74·80	265	169	63·77
1899	145	112	77·25	290	184	63·44
1900	131	102	77·86	325	193	59·38
1901	142	111	78·45	362	246	67·95
1902	165	133	80·06	369	241	65·30
1903	151	108	71·52	424	294	69·34
1904	152	108	71·05	480	370	77·08
1905	132	88	66·66	505	399	79·00
1906	190	106	55·78	535	349	65·23
1907	171	102	59·64	554	422	76·17
1908	160	106	66·25	468	351	75·00
1909	137	95	69·34	540	356	65·93
1910	130	95	73·08	623	437	70·14
1911	137	92	67·15	768	516	67·18
TOTALS	3,209	2,258	70·36	8,160	5,685	69·67

to all who have not passed both the Intermediate and Final Examinations having the effect doubtless of inducing candidates to come up before that date if possible, and being therefore one of the factors to which this great increase must be attributed.

Among the 768 candidates who came up for the Professional Examinations were 69 who had been referred back in their typical subjects and presented themselves for re-examination. Of the 3 "Land Agency" candidates in this category, 2 passed; of the 25 "Valuation" candidates, 23 passed: and of the 41

TABLE E.

	Sub-Division I. Land Agency.			Sub-Division II. Valuation.			Sub-Division III. Building and Quantities.			Percentage of Candidates who Passed.
	Examined.	Passed.	Referred Back in Typical Subject.	Examined.	Passed.	Referred Back in Typical Subject.	Examined.	Passed.	Referred Back in Typical Subject.	
Intermediate Examination, Students	40	26	6	63	51	7	22	10	9	69·60
Intermediate Examination, Non-Students	68	41	1	184	109	21	122	74	24	59·89
Final Examination	36	27	2	99	85	4	36	24	6	79·53
Direct Fellowship Examination	2	1	1	16	13	—	11	8	3	75·86
Totals	146	95	10	362	258	32	191	116	42	67·08

“Building and Quantity Surveyor” candidates, 22 passed, thus completing their respective examinations.

Table E shows the number of candidates who sat in the different sub-divisions of the Professional Examinations, the number who succeeded in passing, the number who failed in their typical subject, and the percentage of candidates who passed. Those candidates who merely came up for re-examination in their typical subject are not included in Table E.

A further increase is noticeable in both the Scottish and Irish Examinations. Of the 33 candidates who applied to sit at Glasgow, 30 presented themselves, and only 4 of these failed; while all 7 candidates at Dublin were successful.

THE EXAMINERS.

A considerable change in the list of examiners is to be noted, the names of Mr. H. A. RIGG, K.C., Mr. C. JOHN MANN, Mr. J. H. OAKLEY, Mr. J. H. SABIN, Mr. H. HERBERT SMITH, and Mr. SAMUEL WALKER dropping out, in some cases after many years of valuable service, and Mr. J. E. BIDWELL, Mr. J. BURY, Mr. EUSTACE HILLS, Mr. R. B. MANN, Mr. A. SAVILL, Mr. E. SAVILL, and Mr. SYDNEY A. SMITH appearing for the first time. The Council feel that The Institution is indeed fortunate in being able year by year to obtain Members and others of ripe experience competent to fill the places of those who find themselves unable to continue the work.

The record number of candidates who presented themselves during the year under review imposed an exceptionally heavy burden upon the examiners, and the obligation of The Institution to all those who took part in the arduous work is heartily acknowledged.

The following examiners acted in an honorary capacity—
In the legal subjects: Mr. J. WILLIS BUND, Mr. E. J. CASTLE, K.C., Mr. R. F. COLAM, Mr. EUSTACE HILLS, Mr. GRAHAM H. MOULD, and Mr. J. DAWBARN YOUNG; and in professional subjects: Mr. J. E. BIDWELL, Mr. J. BURY, Mr. H. CHESTON, Mr. J. J. DONE, Mr. J. E. DROWER, Mr. W. H. EVE, Mr. E. J. HARPER, Mr. T. W. A. HAYWARD, Mr. F. LEE, Mr. R. B. MANN, Mr. P. T. MAW, Mr. J. DOUGLASS MATHEWS, Mr. H. P. MONCKTON, Mr. E. C. PINKS, Mr. A. SAVILL, Mr. E. SAVILL, and Mr. SYDNEY A. SMITH.

THE SPECIAL CERTIFICATE EXAMINATIONS.

The triennial examinations for Special Certificates were held in June of last year, eleven candidates presenting themselves in Sanitary Science, and fourteen in Forestry. Of the former seven, and of the latter six, satisfied the examiners, the Daniel Watney prizes for the first and second in the Forestry Examination being taken respectively by Mr. John W. Aris with 713 marks out of 1,000, and Mr. C. N. Philpot with 711.

The Council desire to acknowledge their indebtedness to the examiners who undertook the work of carrying through this important examination.

SCHOLARSHIPS AT THE UNIVERSITIES.

The successful candidate for The Institution Scholarship of £80 per annum tenable at Cambridge University was Mr. P. D. Sturge, a great-nephew of the late Mr. William Sturge, President of The Institution in 1878. It is pleasant to note the recurrence of these familiar names among the candidates for The Institution Scholarship.

No Scholarship was awarded at Oxford University,

but for those in connection with which the successful candidates had the choice of the University at which they would take their course the competition was encouraging, affording ground for the belief that the changes outlined in the last Annual Report had justified themselves.

The Council would remind Members that these Scholarships, which are of an annual value of £50 or £60 respectively, and are tenable for three years, two being offered yearly, may be held at any University selected by the successful candidates other than Oxford or Cambridge, which have their own Institution Scholarships. The course of study, too, is not restricted, candidates being allowed to choose the course they elect to follow, provided that it is one sanctioned by the Council as bearing on the training and practice of a surveyor.

THE PUBLICATIONS.

After careful consideration the Council awarded the Gold Medal for the best Paper read at an Ordinary General Meeting during the Session 1909-10 to Mr. W. R. Davidge in respect of his Paper on "Town Planning," which both in the interest of its matter and the ability of its compilation compares not unfavourably with those which have proved successful in the past.

During the current session contributions of interest to every branch of the profession have been read on "The Organization of Agricultural Credit," by Mr. R. M. D. Sanders; "Highway Law as Affecting Property Owners," by Mr. E. H. Blake; "The Conservation of our National Water Resources," by Mr. W. R. Baldwin-Wiseman; "Judicial and Parliamentary Decisions with regard to Underground Water," by Messrs. W. Vaux Graham and H. F. Bidder; "The Evolution of Fire-

“Resisting Construction,” by Mr. Wm. Woodward; “Beet Sugar,” by Mr. F. J. Lloyd; “Annual Licence Value,” by Mr. D. Dinwiddy; and “Development of Building Land,” by Mr. J. J. Done. Evenings were also occupied with discussion on Messrs. Grantham and Menzies’ Paper of the previous session on “Road Construction,” and on the two Papers dealing with Water Supply already referred to.

The President awarded his Prize for the best Paper read at a Junior Meeting to Mr. Edmund Howard for his Paper on “The Valuation Clauses of the Finance (1909-10) Act, 1910,” which affords a concise but clear statement of the requirements of that complicated measure as to the land taxes. This Paper appeared in Vol. XVI., Part IV. of the *Professional Notes*. Various Memoranda issued by the Council, and other Papers read at Provincial Meetings on this important subject, will also be found either in Section I. or Section V. of the *Notes*.

THE LIBRARY AND FORESTRY MUSEUM.

The Council have little to report in connection with the Library, no works of outstanding interest having been added during the year. It has, however, been kept up to the high standard of efficiency already set up, all new editions, textbooks and works of value on subjects connected with the profession having been added.

The Loan Library continues in favour, the progressive increase in the number of books circulated to Members reported in previous years being continued during that under review.

The Forestry Museum has been strengthened by two excellent cases showing longitudinal and transverse sections of timbers in common use, which will form a valuable complement to the two cases completed in the

previous year. The Council hope that this may prove the first step towards the entire reorganization of the Museum, and they have been fortunate in obtaining the services as curator of Mr. M. C. Duchesne, who from the first has shown the greatest interest in the Museum, to carry out a scheme by which it may be made of a thoroughly practical use to Members.

THE PROVINCIAL COMMITTEES.

The following table shows the several Provincial Committees, their Chairmen, Hon. Secretaries, and total membership.

TABLE F.

Committee.	Chairman.	Hon. Secretary.	Number of Members.
Northumberland and Durham	C. H. Sample	A. P. Ker	65
Cumberland and Westmorland	H. J. Watson	T. Brown, Jun.	33
Lancashire and Cheshire ...	J. D. Wallis	J. H. Hall	209
Yorkshire	E. S. Cox	R. E. Horsfall	169
Salop and Hereford and Mid-Wales	W. Forrester Addie	A. M. Hickman	48
Derby and Stafford	T. A. Fuller	A. J. Hooley	77
Nottingham and Lincoln ...	Joshua Walker	E. J. Turton	75
Monmouth and South Wales	S. H. Cowper Coles	F. H. Osmond-Smith	87
Warwick and Worcester ...	H. Hendriks	F. Lakin-Smith	117
Leicester, Northampton, and Rutland	D. T. Thring	M. T. Woolley	63
Cambridge, Huntingdon, Norfolk, and Suffolk	W. P. Theakston	L. G. Hawkins	123
Berks, Bucks, and Oxon ...	D. Haslam, Jun.	M. C. Duchesne	106
Beds, Essex, Herts, and Middlesex	H. T. Eve	—	242
Devon and Cornwall	A. P. Jenkin	J. F. Bowden	90
Somerset, Glo'ster, and North Wilts	H. B. Napier	F.A.S. Goodbody	109
Hants, Dorset, and South Wilts	H. S. Senior	H. E. Duke	171
Kent	H. M. Cobb	R. Cobb	169
Surrey	C. F. Slater	T. Brent	189
Sussex	R. H. Powell	J. C. Lucas	104
North Wales	W. C. Pickering	G. E. Cragg	14
Irish Committee	C. Dickinson	B. J. Newcombe	179
Scottish Committee	J. I. Davidson	W. Fraser	129

The usual meetings of Provincial Committees at different centres have taken place with perhaps greater frequency than usual, as it has been found convenient for Members to meet for the purpose of exchanging views upon points of difficulty arising under the Finance (1909-10) Act, 1910. For this reason it has been the less necessary for more formal addresses to be provided at these meetings, but it will not be forgotten that, in order to make these meetings attractive to Members, the Council are always ready to find competent men to lecture on selected subjects if desired.

The following addresses have been given at Provincial Meetings during the year:—

Provincial Committee.	Subject.
Bedford, Essex, Hertford, and Middlesex	The Finance Act.
Leicestershire, Northants., and Rutland ...	The Finance Act.
South Wales	The Finance Act.
Devon and Cornwall	The Finance Act.
Notts and Lincoln	The Finance Act.
Warwick and Worcester	The Finance Act.

The Council recognise clearly how important it is that the corporate life of The Institution in the provinces should be strong and vigorous, and they are willing to do all possible in their turn to assist the chairmen and honorary secretaries of the local committees to secure that end. Their thanks are due to these gentlemen for their valuable co-operation in the large number of matters upon which the opinion and assistance of Members practising in the provinces have been needed during

the year. Questions arising under the Finance Act, together with the very large number of candidates for examination whose applications had to be considered locally, must have thrown an amount of work upon them which might well have proved burdensome had it not been so readily and cheerfully borne.

THE INSTITUTION PREMISES.

The possibility of an extension of The Institution premises over Princes Mews to the new street at the back, referred to in the last Annual Report, has now practically been settled. Mr. Paul Waterhouse, F.R.I.B.A., has prepared plans extending the Lecture Hall and the Council Chamber, and making use of the ground floor thereunder for the staff offices, which are at present much scattered. This will not only allow the ordinary work of The Institution to be more conveniently carried on, but will also provide both a ground-floor lavatory and improved accommodation for writing and arbitrations.

The elevation to the new street proposed by Mr. Waterhouse is a dignified one, in accord with the existing building, and the Council feel that when the extension is complete with the additional frontages The Institution will be housed in a manner befitting the position which it has attained.

MISCELLANEOUS.

Members will have noted with satisfaction the recognition accorded to The Institution in the Honours List of last June by the knighthood conferred by His

Majesty on their late President, Sir Alexander R. Stenning.

As doubtless has been the case with other professional bodies, the main work of the Council during the year has been concentrated upon the Finance (1909-10) Act, 1910, and in this they have received valuable assistance from the Provincial Committees. Two Memoranda upon the Act have been issued, as well as a *Record of Values and Deductions*, many thousands of which have since been ordered by Members, while both the *Transactions* and the *Professional Notes* contain much information on the subject gathered from various sources. The Council have also been in constant communication with the authorities on different points of difficulty in the hope that a basis of mutual understanding might be arrived at which would lighten the work cast upon Members, and at the same time do something to secure the smooth working of the Act.

The Council note with satisfaction the large number of Members of The Institution on the staff of the Valuation Department. Their appointment offers a satisfactory indication that the valuations will be dealt with in a broad and professional manner, and that points of friction will be reduced to a minimum.

The arrangements for the Conference with the Surveyors-General of the several Colonies, called by the Secretary of State for the Colonies in the hope of securing reciprocity in the authorisation of surveyors throughout the Empire, have now been completed. The Conference will be held at The Institution in June, and will be attended by representatives of the Australian, New Zealand, and Canadian Colonies, the Institution of Civil Engineers, and The Institution. A report of the

proceedings will be presented to Parliament, and published in due course.

The examinations for Colonial survey appointments which are now undertaken by The Institution on behalf of the Colonial Office, were first held in April last, nine candidates being examined, six of whom qualified for appointments. Particulars of the examination, which is both practical and mathematical, will be found in Vol. XVI. of the *Professional Notes*, or may be obtained on application to the Colonial Office.

The Council nominated four Members representative of the profession in different parts of Great Britain to give evidence before the Committee set up by the President of the Board of Agriculture to consider the position of tenant farmers on the occasion of any change in the ownership of their holdings, whether by reason of the death of the landlord, the sale of the land, or otherwise. The subject is an important one, and worthy of careful consideration and discussion by Provincial Committees, whose views thereon the Council would welcome.

An invitation having been received from the Belgian authorities that The Institution should be represented at the National and International Congress of Surveyors at Brussels in August last, the Council nominated Mr. Arthur Vernon, Past-President, and Mr. J. E. Drower, Member of the Quantity Surveyors' Committee, for that purpose. An interesting report on the Congress from the pen of the latter will be found in the *Professional Notes*.

It will be remembered that some years ago the Council thought it desirable to issue a Memorandum to all public bodies, drawing their attention to the serious objections to the practice of inviting Quantity

Surveyors to tender for employment. While there is reason to hope that this practice is certainly not extending, a case was recently brought to the notice of the Council in which surveyors were asked to compete against each other in respect of the time within which the work was to be completed, a method almost equally to be deprecated as subversive to accurate work. The original Memorandum was therefore extended to cover this case, and has again been widely issued throughout the United Kingdom, a course which it is hoped may be followed by similar good results to those which were associated with the issue of the original Memorandum.

ADDENDUM.

The following are the more important comments made by the examiners upon the work of candidates at the recent professional examinations :—

Sub-Division I.—The work in connection with the Construction and Arrangement of Farm Homesteads is still somewhat unsatisfactory, candidates being deficient in respect of the detail, planning and drawing of farm buildings.

The examiner in Agricultural Chemistry reports a general lack of chemical knowledge as opposed to practical agricultural knowledge, particularly with regard to the composition of the substances with which a farmer has to deal, such as soils, manures, animal foods, &c.

The examiners in Forestry also report that with a few exceptions the candidates exhibited a lack of practical knowledge. In the outdoor work many did not know how to use the strap and pole properly, nor could they have been trusted to make a timber valuation, while the indoor work showed an equally superficial and elementary knowledge.

The papers in Land Drainage appear on the whole to have been good, but the examiner reports that many candidates hold the belief, probably obtained from a textbook, that it is usual to lay drains in grass land more closely together than in plough. Although in theory something may be said in favour of this, in practice the reverse is the case.

Sub-Division II.—As usual the work in the typical subject both in the Intermediate and Final Examinations was of a high standard, but in the case of the former the examiner remarks upon the disinclination of many candidates to recognise that it may be correct to capitalise at one rate of interest and to defer at another. Greater skill in answering questions requiring definition or explanation, and less reticence in showing the methods by which certain results are obtained, should be exhibited.

Sub-Division III. : Quantities.—The examiner in the Intermediate Division expresses satisfaction that on the whole the papers displayed a better general practical knowledge of the subject than on any previous occasion. There was, however, still evidence of an inability to utilise to the best advantage the knowledge possessed; and a tendency to waste time in immaterial and supererogatory matters which might have been better occupied in dealing with more essential points.

In the Final Examination, estimating seems to have been the weak spot, few of the candidates showing that they had devoted time to a real study of the subject. There was also evidence that insufficient attention had been given to the study of actual work and practical details, with the result that ludicrous mistakes were not uncommon. The examiner also comments on the lack of system exhibited, much of the work being done in a disjointed fashion.

Constructive and Working Drawings.—Too little attention appeared to have been paid to carpenters' and joiners' work, while the draughtsmanship left something to be desired. In the paper on Iron and Timber Roofs

a weak spot was found in the jointing of the steel principal.

General.—The examiner in Surveying reports that candidates showed too great a desire to acquire merely sufficient knowledge to qualify for the examination. Hence in the case of the Level Book most of the candidates had no knowledge of any application of a fixed datum line, and no experience in the use of intermediate bench marks in a continuous section. In reducing the levels they carried forward the summation of back-sights and fore-sights from page to page, instead of balancing each page separately, and were therefore likely to carry forward an error without detection.

In the subject of Local and Imperial Taxation the statutes governing the assessment of property had not been properly studied. Many candidates confused Tenants' Property Tax with Inhabited House Duty, and insufficient study of the new land taxes was displayed.

The theoretical knowledge exhibited in the legal subjects and copyholds is usually satisfactory, but the examiners again refer to the difficulty candidates seem to experience in putting their knowledge to a practical application. The examiner in the Law of Dilapidations specially refers to their inability to distinguish between what is usual as a matter of practice and what is binding as a matter of law.

In Book-keeping a clearer knowledge is desirable of what is needed in the preparation of Trading and Profit and Loss Accounts from a Trial Balance, and as to the treatment of a Sinking Fund.

Throughout the examiners report a failing on the part of candidates to read the questions carefully, much time being wasted in answering questions which are not

asked and to which consequently no marks are allotted. Candidates should also remember that the length of an answer is not a measure of its value. Conciseness and correctness together are a clear indication that the candidate knows his subject, while a long rambling answer is likely to make the examiner believe that he is doubtful of his knowledge, but hopes to hit the mark by the width of his discharge.

THE ANNUAL COUNTRY MEETING.

The Annual Country Meeting was held at Liverpool on the 25th and 26th May by invitation of the Lancashire and Cheshire Committee, who extended to the current year their invitation of 1910, the Meeting fixed for May in that year having been abandoned owing to the death of H.M. King Edward VII.

A large gathering from all parts of the kingdom attended, and were received in the Council Chamber of the Town Hall by the Lord Mayor (Councillor S. Mason Hutchinson, J.P.), who welcomed them most warmly to the City.

The President, Mr. Leslie Robert Vigers, having expressed to the Lord Mayor the thanks of all present for the kind manner in which he had received them, and also for the loan of the Council Chamber for their Meeting, then took the chair, and the following Papers were read and discussed:—

- (1) "The Mersey Dock Estate," by Mr. Oswald W. Young (Fellow);
- (2) "Cheshire County Council Small Holdings," by Mr. W. McCracken (Fellow).

Votes of thanks having been passed to the readers of the Papers, the members proceeded to The Exchange Station Hotel, where they were entertained at luncheon by the Lancashire and Cheshire Committee.

The afternoon was devoted to visits to places of interest in Liverpool and the immediate vicinity. One

party in the charge of Messrs. W. E. Mills, Glegge Thomas, and O. W. Young, embarked on a special steamer for a cruise on the River Mersey to view the docks and shipping.

Another, under the guidance of Messrs. Edmund Kirby and S. A. Kelly, visited the Cathedral now in course of erection, and afterwards drove through Queen's Drive to Calderstones Park.

A third party conducted by Mr. Henry Hartley, visited the Grain Silo, Tobacco Warchouses, and Dock Offices.

In the evening the members dined together at the Adelphi Hotel, the President occupying the chair, supported by many members of the council, among the guests being the Lord Mayor of Liverpool, Mr. W. H. Lever, since created a baronet, the Mayor of Bootle, Sir Charles Petrie, Sir Edward Evans, the Mayor of Birkenhead, and His Honour Judge Taylor, K.C.

The second day was as usual given up to excursions to places of historical or professional interest. The first and by far the larger party, under the guidance of Messrs. W. McCracken, Coard S. Pain, and F. W. Thompson, left Liverpool soon after ten for Port Sunlight. After inspecting this most interesting specimen of modern town planning the members were conducted through the soap works of Messrs. Lever Brothers, and then adjourned to the Bridge Inn, where they were hospitably entertained at luncheon by Mr. W. H. Lever.

After the luncheon those taking part in the excursion drove to Ledsham, where they were shown over the small holdings estate of the Cheshire County Council by Mr. E. C. Leycester and Mr. McCracken, the Chairman and Vice-Chairman respectively of the Small

Holdings Committee. Tea was served at Hooton on the return journey, and the members then dispersed, some to Chester and London, and others back to Liverpool.

The second party, in the charge of Messrs. R. F. Davies, C. E. Linaker, W. E. Mills, C. T. Parker, and H. Swetenham, left Liverpool by rail, arriving at Chester about 11 o'clock. The city walls and ancient Cathedral were first visited, and afterwards the other places of interest, including the Town Hall, where the Mayor of Chester (Alderman D. L. Hewitt) met the members and showed them some of the interesting muniments of the city.

After luncheon at the Grosvenor Hotel, a drive to Eaton Hall had been arranged, and the Hon. C. T. Parker, agent to the Duke of Westminster, showed the party over the mansion gardens, stud farm, and estate light railway. Tea at the Iron Bridge, and a return to Chester by steamer down the River Dee, brought the excursion to a conclusion.

The Council are glad to record that the visit was in every respect successful. A large number of Members attended, and the arrangements made by the Lancashire and Cheshire Committee were most complete. The fine weather throughout the visit enabled all to take full advantage of the admirable programme submitted for their enjoyment.

So perfectly organised a gathering must have entailed an enormous amount of work on the Committee, and the Council wish to express their hearty thanks to all concerned; especially are their thanks due to the Chairman, Mr. J. D. Wallis, Mr. W. E. Mills, Deputy-Chairman of the Reception Committee, and Mr. J. Herbert Hall, the Honorary Secretary.

The thanks of The Institution are also due to the

Rt. Hon. the Lord Mayor and Corporation of Liverpool for their courtesy in allowing the use of the Council Chamber for the opening ceremony and conference ; to Sir William H. Lever, Bart., for his hospitality at Port Sunlight ; to Mr. H. R. Robertson, Chairman of the Mersey Docks and Harbour Board, and Mr. J. Blyth, Chairman of the Liverpool Grain Storage and Transit Company, Limited, for the facilities afforded for the inspection of the Dock Offices and Grain Silo ; and to the many others who did so much to contribute to the interest of the meeting.

				BALANCE SHEET				
1910.				ASSETS				
				£	s.	d.	£	s.
CASH at Bankers and in hands of Secretary :—								
Deposit Account	...	...	...	2,500	0	0		
Current Account (including £50 Petty Cash)	...	...	...	252	5	7		
Library, Forestry, and Geological Account	...	...	...	316	7	0		
"Prize Endowment" Capital Account	...	...	...	0	14	9		
"Prize Endowment" Income Account	...	...	...	110	4	8		
Scholarship Fund	...	...	...	52	7	4		
Penfold Scholarship Fund	...	...	...	10	2	8		
							3,242	2
Furniture	...	...	...				1,266	11
Library, Forestry, and Geological Account	...	...	...				5,090	5
INVESTMENTS :—								
The Premises No. 11, Great George Street, Westminster, S.W., at cost							20,230	19
£	s.	d.						
3,314	18	7	India 3% Stock at 82½	...	...		2,734	16
3,399	4	4	New South Wales 3% Inscribed Stock at 86½	...	...		2,940	6
4,529	18	1	Consols 2½% Stock at 79¼	...	...		3,589	19
Library, Forestry, and Geological Account.								
£	s.	d.						
2,959	19	3	Consols 2½% Stock at 79¼	...	...		2,345	15
£	s.	d.	Prize Endowment Account.					
503	1	11	India 3% Stock at 82½	...	415	1	1	
278	0	3	Midland Railway 2½% Debenture Stock at 69½	...	193	4	4	
254	0	0	North British Railway No. 1 Preference Stock at 105	...	266	14	0	
413	16	8	New 2½% Stock at 77½	...	320	14	5	
440	10	8	India 3½% Stock at 95	...	418	10	2	
500	0	0	Courage and Co. 3½% B Debenture Stock at 65	...	325	0	0	
							1,939	4
£	s.	d.	Scholarship Fund.					
1,172	19	1	Consols 2½% Stock at cost price	...	1,600	0	0	
776	8	4	Metropolitan Water Board B Stock at cost price	...	689	14	2	
							1,689	14
£	s.	d.	Penfold Scholarship Fund.					
1,600	0	0	Canadian Pacific Railway 4% Debenture Stock at cost price	...			1,709	2
Amounts due, but unpaid at date, viz. :—								
Subscriptions and Entrance Fees	...	...	...	907	4	0		
Fees for hire of Rooms	...	...	...	34	13	0		
Rent of Offices, &c. (Tribunal of Appeal)	...	...	...	33	5	0		
Rent of No. 11, Great George Street, S.W.	...	...	...	225	0	0		
Transactions	...	...	...	1	19	0		
							1,202	1
							£47,980	17

N.B.—The above Assets do not include the value of the Institution Premises No. 12, Great George Street, S.W., held on a Lease for 999 years from 1895.

31st DECEMBER, 1910.

LIABILITIES.

1910.

	£	s.	d.
Accumulations Account	32,537	19	5
Library, Forestry, and Geological Account	7,752	8	0
"Prize Endowment" Capital Account	1,939	18	9
"Prize Endowment" Income Account	110	4	8
Examinations Suspense Account	1,337	14	0
Scholarship Fund	1,742	1	6
"Penfold" Scholarship Fund	1,719	5	5
Due to Sundry Creditors	841	6	0

£47,980 17 9

Examined with books, vouchers, &c., and found correct.

TANSLEY WITT, F.C.A., Chartered Accountant. 27th April, 1911.

H. C. NEWMARCH,
EDMUND HOWARD,
Auditors.

RECEIPTS.

FOR THE YEAR ENDED

		RECEIPTS.			FOR THE YEAR ENDED		
		£	s.	d.	£	s.	d.
1910.	To Cash at Bankers and in hands of Secretary :	£	s.	d.	£	s.	d.
Jan. 1st.	On Current Account including £50 Petty						
	Cash in the hands of the Secretary ...				641	7	2
Dec. 31st.	RECEIPTS ON INCOME ACCOUNT :—						
	To 1,686 Fellows' Subscriptions at £3 3s.	5,310	18	0			
	„ 62 Fellows' Subscriptions, Arrears at £3 3s. ...	195	6	0			
	„ 34 Fellows' Subscriptions paid in advance for 1911 at £3 3s. ...	107	2	0			
	„ 15 Fellows' Subscriptions reinstated at £3 3s. ...	47	5	0			
	„ 1 Fellow's Subscription, Transfer at £3 3s. ...	3	3	0			
	„ 33 Differences on Transfer ...	34	13	0	5,698	7	0
	„ 1,888 Professional Associates', Associates', and Colonial Fellows' Subscriptions at £2 2s. ...	3,964	16	0			
	„ 124 Professional Associates', Associates', and Colonial Fellows' Arrears at £2 2s. ...	260	8	0			
	„ 12 Professional Associates', Associates', and Colonial Fellows' Subscriptions paid in advance for 1911 at £2 2s. ...	25	4	0			
	„ 20 Professional Associates reinstated at £2 2s. ...	42	0	0	4,292	8	0
	„ 328 Students' Subscriptions at £1 1s. ...	344	8	0			
	„ 36 Students' Subscriptions paid in advance for 1911 at £1 1s. ...	37	16	0	382	4	0
	„ Hire of Rooms ...				442	11	6
	„ Dividends and Interest ...				289	0	3
	„ Rent of Leasehold Property, No. 11, Great George Street, S.W. ...	847	10	0			
	„ Less Ground Rent on same ...	310	15	0	536	15	0
	EXAMINATIONS ACCOUNT :—						
	To Candidates' Examination Fees ...	2,295	6	0	11,641	5	9
	„ Sale of Syllabus ...	57	6	10	2,352	12	10
	„ Less Examiners' and Moderators' Fees, Hire of Hall, and Sundry Disbursements ...				1,310	7	4
					1,042	5	6
	RECEIPTS ON CAPITAL ACCOUNT :—						
	To 23 Fellows' Entrance Fees at £5 5s. ...	120	15	0			
	„ 66 Fellows' Difference of Entrance Fees at £2 2s. ...	138	12	0	259	7	0
	„ 249 Professional Associates', Associates', and Colonial Fellows' Entrance Fees at £3 3s. ...				784	7	0
					1,043	14	0
	SCHOLARSHIP FUND :—						
	To Dividends ...				38	11	4
	PENFOLD SCHOLARSHIP FUND :—						
	To Dividends... ..				30	2	8
	EXAMINATIONS "SUSPENSE" ACCOUNT :—						
	To Examination Fees received ...				576	9	0
	„ Less Entrance Fees transferred ...	270	18	0			
	„ „ Subscriptions transferred ...	110	5	0			
	„ „ Examination Fees transferred... ..	46	4	0			
	„ „ Examination Fees refunded ...	4	4	0	431	11	0
					144	18	0
	RESERVE FUND :—						
	To Dividends				51	3	6
					£14,633	7	11

31ST DECEMBER, 1910.

PAYMENTS.

	£	s.	d.	£	s.	d.	£	s.	d.
PAYMENTS ON INCOME ACCOUNT:—									
By <i>Transactions</i> : Publication and Re-									
porting						536	16	5	
<i>Professional Notes</i>						432	18	10	
Salaries and Pension						2,813	14	4	
Wages and Pension						376	1	2	
Council Medal						13	15	0	
Sundry Disbursements and Housekeeper's									
Account						422	19	3	
Postage and Receipt Stamps, General...	336	19	7						
" <i>Transactions</i>	200	13	8						
" <i>Professional Notes</i>	130	2	8						
						667	15	11	
Corporation Duty, Rates, Taxes, and									
Insurance						935	6	10	
Staff, Endowment, Insurance Premiums						477	13	2	
Fuel, Light, and Water						204	7	10	
Ground Rent, less Tax	941	13	4						
Less Amount received from the									
Tribunal of Appeal	120	0	0						
						821	13	4	
Repairs						27	8	6	
Stationery, Books of Account, &c. ...						78	9	11	
Country Meeting						70	10	0	
Brussels Conference						23	2	6	
Printing, Lithography, and Binding ...						895	18	3	
Parliamentary Papers and Periodicals						45	0	3	
Provincial Committees and Junior									
Meetings						686	18	8	
Scholarships						428	11	0	
Penfold Scholarship						20	0	0	
									9,979 1 2
SCHOLARSHIP INVESTMENT FUND:—									
By purchase of £776 8s. 4d. Metropolitan									
Water Board B Stock									689 14 2
PAYMENTS ON CAPITAL ACCOUNT:—									
By Purchase of £1,129 15s. 5d. New									
South Wales 3% Inscribed Stock									1,000 0 0
RESERVE FUND:—									
By Purchase of £182 5s. 4d. Consols 2½%									149 17 0
Cash at Bankers and in hands of									
Secretary, viz. :—									
On Deposit Account						2,500	0	0	
Current Account, including £50 Petty									
Cash in the hands of Secretary ...						314	15	7	
									2,814 15 7

£14,633 7 11

LIBRARY, FORESTRY, AND

1910.			£	s.	d.
Dec. 31st.	To Purchase of Books, Maps, &c. :—				
	General Library ...	... £223 15 6			
	Loan Library ...	... 40 6 4			
			264	1	10
	„ Amount of Depreciation written off ...	... 412 14 6			
	„ Annual Subscriptions to Palæontographical Society ...	... 2 2 0			
	„ Annual Subscription to Topographical Society ...	... 1 1 0			
	„ Stationery and Printing ...	... 17 19 6			
	„ Insurance ...	... 4 14 0			
	„ Arranging Forestry Specimens ...	... 25 0 0			
	„ Fittings ...	... 8 12 4			
	„ Binding ...	... 22 11 9			
	„ Sundries ...	... 0 12 3			
	„ Decrease in value of Investments ...	... 111 0 0			
	„ Balance carried forward* ...	... 7,752 8 0			
	* Cash in hand ...	£316 7 0			
	£2,959 19s. 3d. Consols 2½ %				
	at 79¼ ...	2,345 15 4			
	Value of Books, Forestry, and				
	Geological Collection ...	5,090 5 8			
			£8,622	17	2

ACCUMULATIONS

1910.			£	s.	d.
Dec. 31st.	To Decrease in value of Investments ...	... 414 18 1			
	„ Depreciation on Furniture ...	... 67 0 0			
	„ Amount transferred to Scholarship Fund ...	... 689 14 2			
	„ Balance carried forward ...	... 32,537 19 5			
			£33,709	11	8

GEOLOGICAL ACCOUNT.

1910.						£	s.	d.
Jan. 1st.	By Balance brought forward	...	...	...	...	7,927	15	8
Dec. 31st.	„ Increased Values at this date, viz. :—							
	Books purchased	...	...	...	...	264	1	10
	Books presented	...	...	...	...	24	7	0
	„ Dividends	...	...	...	...	69	13	8
	„ Donations	...	...	...	...	336	19	0

£8,622 17 2

1911.						£	s.	d.
Jan. 1st.	By Balance brought forward...	...	...	...	...	£7,752	8	0

ACCOUNT.

1910.						£	s.	d.
Jan. 1st.	By Balance brought forward	...	...	...	...	25,535	19	5
Dec. 31st.	„ Transfer from Reserve Fund Account	...	...	...	...	3,907	10	5
	„ Excess of Income applicable to 1910	...	...	...	...	2,180	2	4
	„ Excess of Receipts over Payments on Examinations Account	...	...	...	...	1,042	5	6
	„ Excess of Receipts over Payments on Capital Account	...	...	...	...	1,043	14	0

£33,709 11 8

1911.						£	s.	d.
Jan. 1st.	By Balance brought forward	...	...	...	...	£32,537	19	5

"PRIZE ENDOWMENT"

1910.				£	s.	d.
Dec. 31st.	To Decrease in value of Investments	...	...	...	76	15 11
	„ Balance carried forward	...	...	...	1,939	18 9
	"Penfold Gift"—					
	£503 1s. 11d. India 3 %	£	s.	d.		
	Stock at 82½	...	415	1	1	
	"Beadel Bequest"—					
	£278 0s. 3d. Midland					
	Railway 2½ % Debenture					
	Stock at 69½	...	193	4	4	
	Cash in hand	...	0	14	9	
	"Crawter Bequest"—					
	£254 North British Rail-					
	way No. 1 Preference					
	Stock at 105	...	266	14	0	
	"Daniel Watney Gift"—					
	£413 16s. 8d. New 2½ %					
	Stock at 77½	...	320	14	5	
	"Driver Bequest"—					
	£440 10s. 8d. India 3½ %					
	Stock at 95	...	418	10	2	
	"Galsworthy Gift"—					
	£500 Courage & Co. 3½ %					
	B Debenture Stock at 65	...	325	0	0	
				£2,016	14	8

"PRIZE ENDOWMENT"

1910.				£	s.	d.
Dec. 31st.	To Paid for "Beadel Prize"	...	...	...	4	18 0
	„ Paid for "Driver Prize"	...	...	...	14	19 6
	„ Paid for "Crawter Prize"	...	...	...	10	0 0
	„ Paid for "Penfold Prize"	...	...	...	14	4 4
	„ Paid for "Daniel Watney Prize"	...	...	...	15	0 0
	„ Paid for "Galsworthy Prize"	...	...	...	14	6 6
	„ Balance carried forward	...	...	...	110	4 8

 £183 13 0

CAPITAL ACCOUNT.

1910.		£	s.	d.
Jan. 1st.	By Balance brought forward	2,016	14	8

£2,016 14 8

1911.		£	s.	d.
Jan. 1st.	By Balance brought forward	£1,939	18	9

INCOME ACCOUNT.

1910.		£	s.	d.	£	s.	d.
Jan. 1st.	By Balance brought forward				112	2	8
Dec. 31st.	„ Dividends, viz. :—						
	“ Beadel ” Bequest	6	10	10			
	“ Driver ” Bequest	14	10	8			
	“ Crawter ” Bequest	9	11	4			
	“ Penfold ” Gift	14	4	4			
	“ Daniel Watney ” Gift	9	14	8			
	“ Galsworthy ” Gift	16	9	8			
					71	1	6
	Excess of Expenditure on the “ Driver ”						
	Prize transferred to Revenue General						
	Prize Account					8	10
					£183	13	0

1911.		£	s.	d.
Jan. 1st.	By Balance brought forward	£110	4	8

APPENDIX TO VOL. XLIII.

Obituary.

JAMES BARR (Fellow), who had been a Member of The Institution since 1891, and who died in July, 1910, was senior partner of the firm of Messrs. James Barr & Son, Glasgow.

He received his early training in the office of his uncle, Thomas Davies Smellie, of Glasgow (a Fellow of The Institution), and subsequently under Sir John Bouch, civil engineer, of Edinburgh. In 1868 Mr. BARR was appointed master of works and burgh surveyor for the town of Greenock, a position which he resigned in 1875 in order to carry on private practice in Glasgow. He rapidly built up an extensive business as a civil engineer, quantity surveyor, and valuator. He was engaged in work for the various Scottish Railway Companies, and a number of local authorities, and his experience in valuations and arbitrations was large and varied.

Endowed with a commanding presence and a genial and courteous manner, Mr. BARR enjoyed the esteem and regard of his professional brethren, whom he was always ready to aid with the best of counsel. His uprightness, sense of justice, and sound common-sense made him invaluable as an adviser or as an arbiter, and

his removal by death is a great loss to the profession in Scotland. Mr. BARR, who was in his 66th year, was a member of the Institution of Civil Engineers.

CHARLES S. BATHGATE (Fellow) was a well-known and much respected figure in the East End Division of Glasgow, being actively connected with many charitable and religious institutions.

After being employed in the office of Mr. Begg, of Glasgow, he entered that of Mr. Stob, where he rose gradually by his ability to be chief clerk, partner, and finally proprietor. He was called upon several times to do prominent service for the House Factors' Association.

Mr. BATHGATE was chairman of the Camlachie Liberal Unionist Association, and was keenly interested in both Imperial and municipal politics.

He died in April, 1911, having been a Fellow of The Institution since 1899.

GEORGE JAMES BROWN (Fellow), who had been a Member of The Institution since 1881, died in October, 1910, while spending a holiday in Scotland. At the time of his death he was head of the firm of Messrs. G. J. Brown & Son, Westminster.

He was articled to Mr. Charles Bailey, who will be remembered by his work in connection with the Tithe Commission of 1836, subsequently becoming his partner, the firm which had then been established ten years being styled Messrs. Bailey, Norman & Brown.

He was closely associated with a number of properties, including the Earl of Radnor's Folkstone and Radnorshire estates, the Huntoko Estate in Derbyshire, and the Pollock Estates in Middlesex.

He was a member of the Land Surveyors' Club, the

Surveyors' Association, and the Tylers and Bricklayers' Company of the City of London, being master of the latter in 1903. During his residence in Wimbledon, which extended over many years, he took a prominent part in the government of the town.

He was keenly interested in and a generous supporter of the Benevolent Fund of The Institution, being an active Member of the Committee up to the end.

CUTHBERT ELLISON CARR (Fellow), of Newcastle, had carried on business as a land agent in that city for many years. For some 22 years he held the position of agent to Lieut.-Colonel W. H. Carr-Ellison, of which family he was a member. He was elected to represent the S. Andrew's North Ward on the Newcastle City Council in 1908, and showed great zeal in his work on the various committees. Mr. CARR was treasurer to the Northern Counties Society for the Blind.

His death took place in April, 1911, in Durham, where he had spent the last two years of his life.

Mr. CARR was chairman of the Northumberland and Durham Committee for the years 1906 and 1907, and during that time proved his interest in The Institution by attending the Standing Committees of the Council in London with noticeable regularity considering the great distance he had to come.

GEORGE CHATTERTON (Fellow) was a son of George Chatterton, J.P., of Cork, and was educated at Trinity College, Dublin, where he became senior Moderator and gold medallist in experimental science. He began his experimental work under the late Sir Joseph Bazalgette, and subsequently acquired an ex-

tensive practice in municipal engineering and as an expert witness before Parliamentary Committees.

Mr. CHATTERTON was a magistrate, a member of the Institution of Civil Engineers, and had been a Fellow of The Institution since 1891. His death took place in July, 1910.

ALEXANDER BROWN DANSKEN (Fellow), who was elected a Member of The Institution in 1898, had an extensive practice throughout Scotland as an assessor of fire losses, and was employed in that capacity by a number of the leading insurance companies. He died in the early part of the present year.

HENRY FOWLER (Fellow) died in November, 1910. By his death one of the oldest and most eminent civil engineers and surveyors of a past generation in this country passed away. His health had been failing for some months, and death was due to a severe operation.

Mr. FOWLER was born at Leeds in 1831, and was the son of Charles Fowler of Leeds, a leading engineer of the early days of the nineteenth century, who, it is interesting to know, in 1838 published the first railway time table, the forerunner of the present "Bradshaw."

Through his father he was associated with George and Robert Stephenson, W. Telford, Sir John Rennie, and Dr. Samuel Smiles, engineers; while John Hawkshaw, who afterwards received a knighthood for his work in connection with the Severn Tunnel, was a pupil in his father's office.

He was also associated with George Hudson, known as "the Railway King," of whose life and work he read

an epitome to the Members of The Institution in Manchester, while chairman of the Counties Palatine Committee in 1903, a position he held for three years to the great advantage of The Institution in that part.

HENRY FOWLER was one of three brothers, all engineers, the eldest of whom, Charles Fowler, of Leeds, died four years ago. His other brother, Alfred Mountain Fowler, M.Inst.C.E. and F.S.I., of Manchester, was borough engineer for Leeds from 1867 to 1872, and afterwards for Newcastle-on-Tyne, Salford, and Stockport. He was also for many years one of the Board of Examiners for the Incorporated Association of Municipal and County Engineers.

He served part of his articles in his father's office, contemporaneously with John Hawkshaw.

After his father's death he finished his articles under Mr. Thomas Grainger, engineer to the Leeds and Thirsk and Leeds and Dewsbury Railways, and Mr. James Forrest, afterwards secretary of the Institution of Civil Engineers.

Mr. FOWLER went to Rugby nearly half a century ago to assist the late Mr. F. Wood, estate agent for the London and North Western Railway Company. After the retirement of this gentleman he established a private practice for himself in London, Rugby, and Manchester, and soon became one of the leading engineering surveyors. He was latterly engaged in revising the surveys of the various lines, showing the running powers, of the several railway companies, including the Great Central, the Great Northern, the London and North Western, the North Eastern, and the North Staffordshire. About fourteen years ago he returned to live at Rugby, but still carried on his business. In 1905, owing to ill health and failing eyesight, he retired.

It was to his excellent mathematical capacity that he owed so much of his success, for he would throw his head back in his chair, cover his eyes with his hands and form most elaborate combinations of figures when contriving his many schemes.

His tastes were refined and intellectual, he was his own librarian in every sense of the word, for he was fond of reading and a thorough bibliophile, especially in the field of archæology.

He took a prominent part in ecclesiastical matters, and in politics he was a staunch Conservative.

He was a past-master of Freemasons and the oldest member of his Lodge.

WILLIAM FREUER (Fellow), whose death took place in February, 1911, was agent for the Marquis of Cholmondeley's estate at Houghton, succeeding his father in 1875. He was also agent for the estates of Mr. S. M. Seymour, of Barwick, for Major C. D. Seymour, Mr. D. B. Garner-Richards, and others.

Mr. FREUER was president of the Norfolk 'Tenant-Right Valuers' Association in 1906, and was returned in 1901 as member for Docking on the Norfolk County Council, which he continued to represent until March last, when the value of his work to the county was recognised by his election as an alderman. He was a justice of the peace, sitting on the Fakenham bench.

He had been a Fellow of The Institution since 1884.

ALEXANDER FREW (Fellow) was born in Glasgow in 1847, and was the eldest son of the late Mr. John Frew, a surveyor of that city.

From 1862 to 1868 he served an apprenticeship with the late Mr. Thomas Kyle, and subsequently with the

firm of Kyle & Frew. On the death of his father in 1869 he was admitted as a partner in the firm with the late Mr. William Dennison, the business being carried on for about thirty years under the style of Kyle, Dennison, & Frew. In 1900 this firm was dissolved, and Mr. FREW continued to practice with two of his sons as Messrs. Kyle & Frew.

His principal work consisted in acting as engineer and surveyor to a large number of the principal land owners in Glasgow and the West of Scotland, and he acquired a large practice in advising proprietors in connection with the design and laying out of estates for building purposes.

In 1881 an important survey of the River Clyde from Carmyle to Port Glasgow was executed by his firm, who for a considerable period also carried out land and marine surveys for the Clyde Trustees.

Mr. FREW acted as engineer to the burghs of Denny and Kilsyth, and designed and carried out water supply and sewage purification schemes for those authorities, and also for various county districts in Stirling and Argyllshire.

He was constantly engaged as an expert witness before Parliamentary Committees and in arbitrations in connection with railway extensions, and he acted for the Airdrie and Coatbridge Water Company in their Parliamentary work.

Mr. FREW died at his residence in Glasgow in November, 1910.

GEORGE HENRY BROUGHAM GLASIER (Fellow) was head of the well-known firm of Messrs. Glasier & Sons, of St. James Street, founded by his father over sixty years ago.

He entered his father's office, at that time in Charing Cross, at the age of thirteen years, and passing through all the various departments underwent twelve years' hard practical training before being admitted to partnership. On the death of his father and brother he continued to practice at Charing Cross, subsequently moving to Spring Gardens, and later to the present address.

Mr. GLASIER possessed an extensive knowledge of compensation matters, and acted on behalf of the Commissioners of H.M. Works and Public Buildings in connection with sites for the India Office, the Home Office, the Foreign Office, and the Law Courts, the acquisition of Battersea Park and Chelsea Embankment, and the formation of New Palace Yard.

He also practised largely as a land agent, managing considerable estates in various parts of the country.

From his design and under his superintendence the construction of the familiar viaduct which spans the South Eastern Railway and the valley near Hastings Station was carried out.

Mr. GLASIER had been a Fellow of The Institution since 1876.

EDWARD ERNEST HARDING (Fellow), who was elected a Professional Associate in 1877, and transferred to the Fellowship five years later, died in 1911.

He served as a pupil in the office of his father, Mr. W. D. Harding, at that time in St. Paul's Churchyard, afterwards becoming a member of the firm.

SIR HENRY MICHAEL HAWLEY, BART. (Fellow), of Boston, Lincolnshire, died in September, 1910.

At the time of his election as a Fellow of The

Institution he was agent for the Lincolnshire, Northamptonshire, Kent, and Middlesex estates of Sir Henry James Hawley, Bart. He also practised on his own account as a land agent and surveyor at Boston, Lincs.

He succeeded to the family title and estates in 1898.

ROBERT NEVILLE HOLBECHE (Fellow), who belonged to an old Warwickshire family, was elected a Fellow in 1882.

He was trained for the Army, receiving his commission as a lieutenant in the Royal Artillery in 1868. After serving some years in the Straits Settlements he retired from the service for the purpose of joining his father, Mr. John Holbeche, who had been over thirty years in practice in Birmingham as a land agent and surveyor, entering into partnership with him in 1874.

Mr. HOLBECHE had a long and varied experience in the management of agricultural and building estates in the Midlands, and enjoyed an extensive practice as arbitrator and valuer, while he was frequently consulted as a specialist on matters connected with charitable trusts, copyholds, and tithe rent-charges.

Mr. HOLBECHE was elected a Member of Council in 1904, retiring shortly before his death in May, 1911. He was a Freemason and for many years a member of the Shakespeare Lodge, Warwick.

WILLIAM WYNNE JEUDWINE (Fellow), whose death took place in April, 1911, had been a Fellow of The Institution since 1883.

He acquired a practical knowledge of surveying as a pupil in the office of Messrs. Rawlence & Squarey of Salisbury, afterwards practising on his own account in

Chesterfield, becoming agent for the estates of the Duke of Devonshire in that district.

Mr. JEUDWINE was for two years chairman of the Derby and Staffordshire Committee, serving during that time on the Professional Practice Committee of the Council in London.

JAMES FRED KEMP-SMITH (Fellow) served successively in the estate office of the Earl of Ilchester, under the agent, the Hon. C. T. Parker, F.S.I., as assistant to Mr. G. Webb, F.S.I., of Sittingbourne, and as chief assistant to Edward K. Fisher, F.S.I., of Market Harborough. He gave up the last-named post in 1890 to become agent to the Orsett Hall estates of Mr. F. H. D. C. Whitmore, which position he held at the time of his death in March, 1911.

Mr. KEMP-SMITH was a member of the Land Agents' Society, and was elected a Professional Associate of The Institution in 1890, and a Fellow in 1892.

JAMES STEWART KINCAID (Fellow), a well-known land agent in Dublin, whose death took place in 1911, was elected a Fellow of The Institution in 1895, and served on the Council for five years. He took the greatest possible interest in the work of the Irish branch, and did much to strengthen the position and usefulness of The Institution in Ireland. Unfortunately for the profession at large, and his colleagues on the Irish Committee in particular, a lingering illness rendered him helpless during the last five years of his life.

DONALD FALCONER MACKENZIE (Fellow), who was elected a Fellow of The Institution in 1899,

was born at Cawdor in Nairnshire, and was engaged in estate management and forestry.

He was employed as factor on a number of North Country estates, including that of Murthly, noted for its great wealth of timber, and while there gained most of that wonderful practical knowledge of exotic trees and their timber for which he was distinguished. In 1884 he was appointed factor for the Morton Hall estates in Mid-Lothian, and subsequently for the Charter Hall estates in Berwickshire as well. These appointments he held until his death last year.

Mr. MACKENZIE was a vice-president of the Royal Scottish Aboricultural Society, of which body he was also an honorary member, a fellow of the Botanical Society of Edinburgh, and one of the examiners in forestry for the Highland and Agricultural Society's Diploma. He contributed largely to the transactions of various societies on aboriculture, sylviculture, and agriculture, and his advice on those subjects was largely sought after.

Mr. MACKENZIE had also a considerable practice as a land valuer, and on the Morton Hall estate a large extent of building land was under his charge.

CHARLES W. MILLAR (Fellow) of Hayward's Heath, whose death took place in December, 1910, was senior partner in the old-established firm of estate agents and auctioneers, Messrs. Millar, Son & Co., of Pall Mall. He was elected a Fellow of The Institution in 1882.

PHILIP MUNRO (Fellow), a prominent engineer and surveyor of Bristol, died in April, 1911, after a long and active life.

The eldest son of Mr. James Munro, a justice of the peace for Sutherland, he was born and educated at Dornoch, N.B., being articled subsequently to a civil engineer and architect in Aberdeen, whose assistant he became in 1857.

Here he gained experience in surveying, bridge drawing and construction, dock and harbour schemes, and railway engineering, and in 1859 he was engaged under the Government on the survey of Jersey, Guernsey, and Alderney, having sole charge of this work, and personally preparing the whole of the trigonometrical and geometrical calculations for the three islands.

He was afterwards appointed assistant engineer to the Guernsey Harbour Works, and for eight years he had charge of the Fourth Division of the Ordnance Survey.

Commencing practice as a civil engineer on his own account, Mr. MUNRO was responsible for designing and carrying out many important undertakings, and in 1878 he went to live in Bristol, where he was identified professionally with a number of projects.

In 1893 he was appointed an inspector of the Board of Agriculture under the Lands Improvement Acts. He was elected a Fellow of The Institution in 1882, and was also a member of the Society of Architects.

HIS HONOUR JUDGE FREDERICK ADOLPHUS PHILBRICK, K.C. (Honorary Member), Examiner in Law to The Institution and for many years examiner to London University, was the eldest son of Frederick Blomfield Philbrick, of Colchester, Attorney-at-Law. He took his degree at the London University at the age of seventeen, and was articled to the town clerk of

Colchester, in whose office the late Mr. C. M. Warming-ton, K.C., was also a pupil. In 1857 he was awarded the Clifford's Inn Prize, and the following year he entered the Middle Temple, obtaining a studentship in November of the same year.

Called to the Bar in 1860, he became a member of the old Home Circuit, being appointed recorder of Colchester in 1870, which office he held until the time of his death.

In 1874, at the early age of 38, he became a Queen's Counsel, and two years later was elected a bencher of his Inn.

Judge PHILBRICK enjoyed a large practice at the Bar, chiefly in compensation cases, and was concerned in the litigation which arose out of the construction of the Thames Embankment. He also practiced largely at the Parliamentary Bar and before the Railway Commission.

He was appointed in 1884 senior counsel to the Post Office on the South-Eastern Circuit, and in 1895 County Court judge, his circuit including Bournemouth, Salisbury, Dorchester, Yeovil, and Poole.

Judge PHILBRICK whose death took place in December, 1910, became an Associate of The Institution in 1869, and was elected an Honorary Member in 1894 on being made a County Court judge.

GEORGE HUNTLEY READ (Fellow), who had been a Fellow of The Institution since 1884, died in December, 1910. Mr. READ was senior partner in the old-established firm of Messrs. J. and R. Kemp & Co., and for many years practised with the late Mr. Walter Sims, subsequently, however, becoming the sole principal, until recently, when his son, Mr. L. Huntley Read, was admitted a partner.

ELIAS PITTS SQUAREY (Past-President) was born at Salisbury on October 20th, 1823. According to his own account he, and his future partner, the late Mr. James Rawlence, F.S.I., were "taken from the plough tail" to be made land agents—an expression not to be taken too literally, probably meaning no more than a commencement on the lowest rung of the agricultural ladder.

Be this as it may, there can be no doubt that, like most men endowed with special proclivities, Mr. SQUAREY displayed a very early aptitude for his future sphere of work, and a degree of courage and independence at least equal to his capacity, for at the early age of eighteen he was actually farming on his own account, and when twenty-five years old was the occupier of a farm of twelve hundred acres belonging to the Earl of Radnor.

There it was that he laid the foundations of that wide knowledge of everything pertaining to land on which his future success was built, and there it was also that he learned at first hand the inner workings of the mind of the British farmer (of all things the most inscrutable), which was to stand him in such good stead in after years by teaching him that beneath an uncompromising exterior no class of men is more intrinsically honest or more ready to respond to fair treatment at the hands of others.

Endowed by nature with very considerable powers of observation, a keen sense of the practical, a hatred of shams, and a high standard of personal integrity, he could not fail to commend himself to all with whom he was brought in contact, even had his path been less smoothed than it was by a gracious placability of manner which encouraged friendliness and disarmed resentments.

In 1852 he became associated in partnership with

the late Mr. James Rawlence, F.S.I., the business being thenceforward carried on under the style of Rawlence & Squarey. The firm rapidly assumed a leading position, not only in Wiltshire but also in Berkshire, Dorsetshire, Hampshire, and Oxfordshire, and other counties, its agencies extending north as far as Shropshire and Lincolnshire, and west as far as Cornwall.

Among the most important of the early accretions to the business was the management of the important estates of the late Mr. James Morrison, of Basildon, the reputed birthplace of Jethro Tull. This was speedily followed by appointments to other large agencies, attracted by the reputation the firm had rapidly acquired.

In the year 1860 the firm opened an office in Great George Street, Westminster. Here, under special statutory powers, was established the well-known Land, Loan and Enfranchisement Company, of which Mr. SQUAREY was an original director, and subsequently chairman. The principal object was to assist landowners (mainly life tenants) to borrow money, with the approval of the Enclosure Commissioners, for the improvement of their estates, the loans (issued at a rate of interest averaging £6 10s. per cent. to cover simple interest and repayment of the capital in 25 years) being secured by rent-charges which were, as a rule, taken over by insurance companies, thus enabling the company to turn over their capital rapidly and without appreciable risk. While agriculture was prosperous the thing worked most successfully. It is on record that in the course of the subsequent twenty years the amount of applications received represented the large total of £1,079,888, of which £163,768 was spent on drainage, £424,098 on farm buildings, £9,853 on enclosures, £9,000 on embanking, £9,041 on roads, and

the remainder on planting, water supply, chalking reclamation, and other improvements. But evil days were in store. Rents were beginning to fall, and securities weakened in proportion, with the result that landowners lost heart, and money was neither sought nor lent so freely as formerly. By 1894 the company was not doing a tenth of the business it did in its prosperous days, and it became finally merged in its older rival the Lands Improvement Company, which still exists.

As might be expected, a man of Mr. SQUAREY'S mark could not hope to escape the affliction of appearing as a witness before Royal Commissions. It is one of the penalties of success. The ordeal, however, was less trying to him than it is to most men, for his calm and equable temper and his habitual moderation of speech kept him unembarrassed under a concentrated fire of questions from a semicircle of gentlemen, each emulously anxious for corroboration of their own preconceived opinions. His evidence looms largely in the Report (1880) of the Royal Commission on Agriculture, and again in the Report (1894) of the Royal Commission on Agriculture Depression, which is more depressing to read than the subject it investigates.

As though his ordinary business were not enough to tax his energies to the utmost, he found time to act as a director of the Wilts and Dorset Bank. Traces of a considerable knowledge of the intricacies of finance are observable in his writings, and it was inevitable that he would be attracted by the resounding speciosities of bimetallism, a subject which, in the early nineties, plunged both professional and amateur economists into a condition hardly distinguishable from civil war, culminating in the famous Report of the Gold and Silver

Commission, the enormous profundities of which left the combatants too stunned to continue the conflict. Now, if one hears of them at all, they come to "bury Cæsar, " not to praise him."

Mr. SQUAREY was also one of the most active of Lord Wantage's supporters on the Board of the Small Farms and Labourers' Dwellings Company, and served zealously as a member of the first Salisbury Diocesan Synod.

This is not the place for political allusions, beyond saying that while clinging tenaciously to the main principles of the political faith in which he had been nurtured, he was, like many others, unable to follow the leader of his party on the question of Home Rule, and during the latter portion of his life became a staunch Unionist. On the question of Protection he was adamant. He would have none of it, though he pleaded earnestly for what he called a "fair platform," urging that what is brought into England from abroad should be sold for what it is, and that its exact place of origin should be declared to the buyer, thus foreshadowing the Merchandise Marks Act of recent years. He was especially indignant about "brewers' substitutes," insisting that they ought to be declared and not allowed to compete on equal terms with English hops and home-grown barley. To this extent alone was he prepared to go on the road to Protection, for it was his boast that his Free Trade principles went back to a date anterior to the time when Bright and Cobden visited Salisbury in the course of their historic campaign. He never wavered in his belief that, given time and a free hand, the British farmer would adapt himself to changed conditions and emerge triumphant from the trials that beset him, without the swaddling clothes of State aid.

Long before the passing of the Agricultural Holdings Act of 1875 he was for giving the tenants a larger measure of freedom from restrictive covenants than was customary at the time—in fact the largest amount of liberty consistent with the protection of the landlord's interest against a slovenly and wasteful use of his property. His views on the subject were lucidly set forth in a Paper entitled "Farming Covenants," read before this Institution more than forty years ago. The Paper showed his complete mastery of the subject, and was distinguished by a fearless advocacy of what he held to be just and right between the parties. Not that there was any reason at any time for supposing that farmers as a class were suffering from serious oppressions, but it was notorious that on some estates antiquated principles of management still prevailed, and supplied a useful handle for reproaches levelled, most unjustly, against the general body of landlords.

A year or two later came changes that were regarded at the time as little short of revolutionary; but not by Mr. SQUAREY. The depression which commenced in 1875, and culminated in the disasters of 1879, led to legislation in the former year which profoundly affected the relations which had so long subsisted between landlords and tenants. A new era had dawned, and in future their dealings with each other were to rest on something firmer than custom and the goodwill which was supposed to subsist, and did in a vast majority subsist, between the parties concerned. Enough has been said to show that Mr. SQUAREY did not shrink from the prospect—quite the contrary. He hailed this new legislation, regarding its main principles as just and righteous, but he was stoutly opposed to the arbitration clauses with their machinery of notices, claims and counter-

claims, as likely to create rather than allay differences and to stir up strife and unkindly feelings between the parties.

He regarded a simple award to the effect that the tenant was or was not entitled to the compensation claimed, and fixing the amount of compensation payable, as meeting all the essential conditions of the situation. He was also opposed to the "contracting out" clauses of the Act as tending to the perpetuation of the outworn system of reference to the "custom of the country" which too often deprived the tenant of compensation for valuable manorial products, and by doing so discouraged good farming.

A consistent believer in the doctrine of *laissez faire*, and the free working of economic laws, he had no belief in the sophistries of the modern rhetorician who would forcibly replace the people on the soil which they failed to cultivate at a profit under conditions many times more favourable than are ever likely to occur again in this country. He saw, with his usual clearness of vision, that it was almost impossible, under normal circumstances, to equip a holding of less than 50 acres with the necessary buildings and appliances except at a cost prohibitive to the tenant, though like other sane persons he did not doubt that it could be done if the cost was to be borne by the community at large. In fact he was old enough to remember the frenzied ravings of Feargus O'Connor and the fate of the small holders of the Isle of Axholme.

Mr. SQUAREY was among the first to join the Surveyors' Institution on its foundation in 1868, his name being the 42nd on the Roll of Members. From the first he evinced the deepest interest in its welfare. He became a member of its Council in 1872, was

appointed a Vice-President in 1880, and served the office of President during the years 1888-9 and 1889-90.

The duties of the position were less arduous at that time than they have since become, but it is needless to say that he discharged them, such as they were, with his customary energy.

In addition to the Paper on "Farming Covenants," already referred to, and his two Opening Addresses, he contributed to the *Transactions* a Paper (designed as one of a series) on Agricultural Geology, which came as a revelation to many who did not look for exact scientific knowledge from a man so absorbed in practical pursuits. Those who knew him better were aware that he took an intelligent interest in everything that bore, even remotely, on the business of his life. His dalliance with the elusive subject of bimetallism has already been referred to, and if he failed to master it he did so in good company, and because human intelligence has its limits. He was no doubt attracted to it by the generous hope that it might possibly be found to be an alleviation, if not a solution, of the distresses of agriculture.

Of his business life as a whole it is not necessary to speak in this memoir, but mention may be made of one transaction of very great magnitude which it fell to his lot to carry through in his later years—the purchase, on behalf of the War Office, of the great Salisbury Plain Estate, for military purposes. His valuations gave such general satisfaction that very few arbitrations were necessary, though the area included in the purchase comprised 60 square miles, and involved an expenditure of over half a million of money.

It may be permissible to refer, very briefly, to the leading characteristics of this able man. The position he held in his profession and the reliance placed on his

judgment best testify to his business powers, while the troops of friends by which he was surrounded are the best evidence of his moral worth. His perfect integrity all believed in, and he had in the fullest measure the courage of his opinions.

He was endowed by Nature with a singularly persuasive and conciliatory manner, and his faculty of graceful speech aided him not a little in his dealings with his fellow men. If his diction in ordinary conversation was a little inclined to the ornate, his style on paper had all the terseness and brevity that marks the business man's sense of the responsibility attaching to the written word. No one was more courteous or had (and showed) a greater respect for the opinions of those from whom he differed, if assured that their views were founded on honest conviction.

He was the happy possessor of a vigorous constitution and of the sanguine temperament, which is one of the best gifts of nature. Nothing affected his invincible optimism or shook his fixed belief that things would "turn out right in the end," however perversely they might shape themselves for the moment. What this meant to a man of many cares and endless business responsibilities, and how valuable an agent it proved towards the prolongation of his life to the patriarchal age of eighty-seven years can be easily imagined.

His beautiful home at The Moot, Downton, near Salisbury, is well known throughout the archæological world. There he delighted to entertain the scientists and others who were attracted to the place by the well-preserved remains, in the grounds of his house, beside the Hampshire Avon, of the historic amphitheatre, said to have been the meeting-place of the Saxon Witenagemote. Here it was that, after a few

months of failing health, Mr. SQUAREY died on the 25th February, 1911, being followed to the graveside by a large and sorrowful company of relatives and mourning friends, the harvest of a long life devoted to duty and the promotion of the welfare of his fellow men. [J. C. R.]

SAMUEL TAYLOR (Fellow), was appointed building surveyor and resident agent on the Nottinghamshire estates of the Earl of Cowper over forty years ago, which position he relinquished at the end of seven years, in order to practise as an architect and land agent in Nuttall. During the time that he was associated with the Cowper estates he was responsible for many structural improvements on the various farms.

Mr. TAYLOR was best known as a designer of farm homesteads and rural cottages, his two books, "Modern Homesteads," published in 1905, and "Inexpensive Rural Cottages and Buildings for Small Holdings," published in 1907, bearing testimony to his extensive grasp of this subject.

He was awarded a medal of merit by the British Dairy Farmers' Association for homestead designs, and was a Government medallist in the science and practice of agriculture and the science of hygiene.

In 1908 Mr. TAYLOR's firm secured third place in the farm plan competition organised by the Royal Agricultural Society.

Mr. TAYLOR filled many local public offices, and was at one time chairman to the Greasley School Board. He was elected a Fellow of The Institution in 1891, and died in July, 1910.

ROBERT UNIACKE FITZGERALD TOWNSEND (Fellow) was head of the well-known firm of Irish

estate and insurance agents, Messrs. Hussey & Townsend, of Cork.

This firm, of which Mr. TOWNSEND was principal, acted as agents for all the great estates in the south during the period of the land agitation. A keen man of business, he was successful in negotiating the sale of a number of the estates under his control under the various Land Purchase Acts.

He was for many years a member of various public boards, as well as a magistrate for the county of Cork.

Mr. TOWNSEND, who died in April, 1911, was elected a Fellow of The Institution in 1895.

HENRY JOHN TREADWELL (Fellow), whose death took place in November, 1910, was a member of the firm of Messrs. Treadwell & Martin, of Charing Cross.

The firm acted as architects to the Metropolitan Asylums Board, and in that capacity designed the Southern Hospital, Carshalton, holding 800 beds, and the Joyce Green Hospital, Dartford. Their designs for the Hull Town Hall extension gained second premium in 1903.

Their many other architectural works in and around London included such widely different undertakings as Messrs. W. H. Willcox & Co.'s warehouse, Southwark; Messrs. Ashby's Cobham Brewery Company's new buildings, Cobham; several villa residences at Sandstead; Presbyterian Church, West Norwood; extensive alterations at the White Hart Hotel, Windsor; St. John's Hospital, Leicester Square; Holy Trinity Church, Tulse Hill; Sandroyd Schools, Cobham; Whitehall House and adjoining premises, Charing Cross.

Mr. TREADWELL became a Professional Associate of

The Institution in 1883, a Fellow in 1886, and a member of the Architectural Association the same year.

PHILIP CHENEVIX TRENCH (Fellow), of Dublin, elected 1895, was one of the best known land agents in Ireland, being associated with many large estates in that country. He was a member of the ancient Huguenot family which had its origin in the person of one Frederic de la Tranche or Trench, who fled from his native land after the massacre of St. Bartholomew's Day, and settled in Northumberland. Since the minority of Lord Ash-town, a member of this family, Mr. Trench had been actively concerned in the management of his estates.

With Lord Airdilaun he was a trustee of the Water Colour Society of Ireland, and was a frequent exhibitor in that Society's exhibitions.

His death took place in April, 1911.

HENRY DE LAVAL WILLIS (Fellow), who occupied a prominent position among the land agents in Ireland, died in July, 1910. He was a son of the late Rev. W. N. Willis, rector of Kilsfeacon and prebendary of Limerick Cathedral, and a brother of Mr. Gilbert de L. Willis, secretary to the Irish Landowners' Convention.

Two of the various properties under his care, the Moroney and the Bodyke estates, became conspicuous during the early land agitation, but his relations with the tenantry remained throughout of the friendliest character. Five years ago he was appointed agent for the extensive Irish estates of Lord Leconfield.

In Ennis, county Clare, where he resided, he was connected with a number of public bodies including the Ennis Town Commissioners and Board of Guardians. Mr. WILLIS became a Fellow of The Institution in 1895.

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DANIEL WATNEY (London)
ROBERT VIGERS (London)
THOMAS MILNER RICKMAN (London)
SIR JOHN F. L. ROLLESTON, M.P. (London)
ARTHUR VERNON (High Wycombe)
HERBERT THOMAS STEWARD (London)
CHARLES BIDWELL (Ely)

GEORGE LANGRIDGE (Tunbridge Wells)
THOMAS TAYLOR WAINWRIGHT
(Liverpool)
HOWARD MARTIN (London)
SIR ALEXANDER ROSE STENNING
(London)
LESLIE ROBERT VIGERS (London)

Honorary Secretary.

PERCIVALL CURREY

Secretary.

ALEXANDER GODDARD.

List of Standing Committees.

Composed of Members of Council and Provincial Chairmen.

BUILDING.
COUNCIL SELECTION
COUNTY DISTRICTS AND COUNTRY
MEETINGS.
DINNER.
EDUCATION.
ELECTIONS.

FINANCE.
FORESTRY.
LIBRARY AND SESSIONAL PAPERS.
PARLIAMENTARY BILLS AND GENERAL
PURPOSES.
PROFESSIONAL PRACTICE.
QUANTITY SURVEYORS.

Past Presidents.

1868 *John Clutton*
1870 *Richard Hall*
1872 *Edward Norton Clifton*
1874 *Thomas Huskinson*
1876 *Edmund James Smith*
1878 *William Sturge*
1880 *Edward Ryde*
1883 *Thomas Smith-Woolley*
1885 *Edward P Anson*
1886 *William James Beadel, M.P.*
1888 *Elias Pitts Squarey*
1890 *Robert Collier Driver **
1892 *Charles John Shoppee*
1894 *Thomas Chatfeild Clarke*
1895 DANIEL WATNEY

1897 *Christopher Oakley*
1898 ROBERT VIGERS
1899 THOMAS MILLER RICKMAN
1900 *John Shaw*
1901 SIR JOHN F. L. ROLLESTON, M.P.
1902 ARTHUR VERNON
1903 *Albert Buck*
1904 HERBERT THOMAS STEWARD
1905 CHARLES BIDWELL
1906 GEORGE LANGRIDGE
1907 THOMAS TAYLOR WAINWRIGHT
1908 HOWARD MARTIN
1909 SIR ALEXANDER ROSE STENNING
1910 LESLIE ROBERT VIGERS

(The names of those deceased are printed in italics).

The Surveyors' Institution

(INCORPORATED BY ROYAL CHARTER)

Is established—

1. To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a Surveyor, viz.—the art of determining the value of all descriptions of landed and house property, and of the various interests therein; the practice of managing and developing estates; and the science of admeasuring and delineating the physical features of the earth, and of measuring and estimating artificers' work.
2. To promote the general interests of the profession, and to maintain and extend its usefulness for the public advantage.

THE INSTITUTION was established in 1868, was incorporated by Royal Charter in 1881, and has a total membership of over 4,000.

THE INSTITUTION consists of four classes, viz.—FELLOWS, PROFESSIONAL ASSOCIATES, ASSOCIATES, and HONORARY MEMBERS, with a class of STUDENTS attached.

A Fellow must have qualified for that position by having acquired a practical knowledge of surveying in one or other of its branches as above defined, and have held for at least five years a responsible position in the profession; and must have passed the Examinations called for by the Rules of Examination, or some other Examination in the United Kingdom or the Colonies which the Council may declare to be equivalent thereto.* A Fellow has the right, conferred by the Charter,

* *The Council possess only a very limited dispensing power as regards the Examinations.*

to use the letters F.S.I. after his name. A Fellow has also the right, under By-Laws allowed by H.M. Privy Council, to describe himself as "Chartered Surveyor."

A PROFESSIONAL ASSOCIATE† must be more than twenty-one years of age, a Surveyor by profession, in practice on his own account or employed as an Assistant in a Surveyor's Office, and qualified for the class by having passed the Intermediate Examinations. A Professional Associate has the right, conferred by the Charter, to use the letters P.A.S.I. after his name. A Professional Associate has also the right, under By-Laws allowed by H.M. Privy Council, to describe himself as "Professional Associate Chartered Surveyor."

An ASSOCIATE must be more than twenty-one years of age, not a Surveyor by profession, but his pursuits must be such as to qualify him to unite with Surveyors in the advancement of professional knowledge.

An HONORARY MEMBER must be a person who, either by reason of his position or experience, or his eminence in science, may be enabled to render assistance in promoting the objects of the Institution, but who is not engaged in practice as a Surveyor in Great Britain or Ireland. He has the privilege of being present and taking part at all Ordinary General Meetings, and of access to the Library, but no right of voting, discussing, or otherwise interfering in the affairs of the Institution; nor is he called on to contribute to its funds.

STUDENTS (who must not be under eighteen years of age) qualify as such by passing the Preliminary Examination. Candidates for Studentship who can produce a Certificate of having passed one of the Examinations mentioned in the Rules, are exempted from this Examination, and may be admitted by the Council on the recommendation (according to a form) of a Member of the Institution. Students are expected to enter for the Professional Examinations under the conditions laid down in the Rules of Examinations.

The Council may accord to Students such privileges, subject to such terms, regulations, and restrictions, as they shall from time to time prescribe.

† *After the Election of Members in October 1913 no Examination Candidate will be eligible for election as a Professional Associate unless he has passed both the Intermediate and Final Examinations.*

Scholarships open to Students and tenable for three years have been instituted at Oxford, Cambridge, and other Universities, of the value of £80 and £50 per annum. Particulars may be obtained from the Secretary of the Institution.

Any person desirous of being admitted into the Institution (excepting to the class of Students) must be proposed and recommended according to a form, in which the full name and qualifications of the candidate must be distinctly specified. This form must be subscribed by him, and signed by at least six Fellows, or four Fellows and two Associates, certifying a practical knowledge of the candidate ; or, by four Members of the Council, of whom the President shall be one, after careful enquiry into the antecedents of the applicant.

The proposal so made, being delivered to the Secretary, will be submitted to the Council, who, on approving the qualifications, will nominate the candidate for election by ballot.

The following are the rates of contribution to the funds :—

	Annual Subscription.				Admission Fee.		
	£	s.	d.		£	s.	d.
<i>Student</i>	1	1	0	.	—		
<i>Associate</i>	2	2	0	.	3	3	0
<i>Professional Associate</i> .	2	2	0	.	3	3	0
<i>Fellow</i>	3	3	0	.	5	5	0

No person can become a Member (other than an Honorary Member) of the Institution, unless and until he pays as his first Subscription to the Institution, in the case of becoming a Fellow of the Institution, the sum of Eight Guineas, in the case of becoming a Professional Associate of the Institution, the sum of Five Guineas, and in the case of becoming an Associate of the Institution, the sum of Five Guineas.

The Examination fees of Students who are successful in passing the Intermediate Examination in their division are carried to their credit as their Entrance Fees on election to Membership.

All Fellows, Professional Associates, and Associates, are required, within twelve months after their election, to deliver to the Council an original Paper on some subject connected with the profession, or to make a donation to the Library or Collection.

The affairs of the Institution are under the management of a Council, which is elected annually, consisting of a President, four Vice-Presidents, sixteen Fellows, two Professional Associates, and two Associates.

The Session of the Institution commences annually on the second Monday in November, and continues to the end of May. The Ordinary General Meetings are held on every alternate Monday during the Session. At these Meetings original communications are read on professional subjects, and their merits fully and freely discussed. Every Member has the privilege of introducing one visitor to these Meetings. Members are entitled to a copy of any printed publication issued by the Institution after their admission.

THE SURVEYORS' INSTITUTION

(INCORPORATED BY ROYAL CHARTER),

12, GREAT GEORGE STREET, WESTMINSTER, S.W.

LIST OF MEMBERS, JULY 1st, 1911.

Honorary Members.

date of tion and Transfer.	HONORARY MEMBERS.	Address.
Feb. 1897	ADDINGTON, THE RIGHT HON. LORD	24, Prince's Gate, S.W.
Nov. 1904	ARMSTRONG, THE RT. HON. LORD	Jesmond Dene, Newcastle-on-Tyne.
Dec. 1880	BANKES, THE HON. MR. JUSTICE	
Nov. 1910	ELDON	45, Eaton Square, S.W.
Jan. 1895	BEDFORD, HIS GRACE THE DUKE OF, K.G.	15, Belgrave Square, S.W.
Mar. 1893	CARRINGTON, THE RIGHT HON THE EARL, K.G., G.C.M.G.	53, Prince's Gate, S.W.
April, 1910	CHALMERS, SIR ROBERT, K.C.B. . . .	Inland Revenue, Somerset House, W.C.
Dec. 1889	CHAPLIN, THE RT. HON. HENRY, M.P.	Stafford House, St. James', S.W.
Jan. 1887	COBHAM, THE RIGHT HON. LORD VISCOUNT	Hagley Hall, Stourbridge.
Nov. 1910	COZENS-HARDY, THE RT. HON. SIR HERBERT HARDY, MASTER OF THE ROLLS	50, Ladbroke Grove, W.
Nov. 1908	DEVONSHIRE, HIS GRACE THE DUKE OF	Devonshire House, Piccadilly, W.
Jan. 1909	DIBDIN, SIR LEWIS T., K.C., D.C.L.	Nobles, Dormansland, East Grinstead.
Nov. 1906	ELLIOTT, SIR THOMAS HENRY, K.C.B.	4, Whitehall Place, S.W.
Mar. 1881	GRANTHAM, THE HON. MR. JUSTICE	100, Eaton Square, S.W.
Mar. 1886	HAMILTON, HIS HONOUR JUDGE	
Nov. 1905	HENRY BEST HANS	3, Paper Buildings, Temple, E.C.
Feb. 1900	HOWARD, SIR EDWARD STAFFORD, K.C.B.	Office of Woods, etc., 1, Whitehall Place, S.W.
Nov. 1901	HOWE, THE RIGHT HON. THE EARL, G.C.V.O.	Curzon House, Curzon Street, W.
Dec. 1880	JAMES OF HEREFORD, THE RIGHT	
Nov. 1895	HON. LORD, G.C.V.O.	41, Cadogan Square, S.W.
Mar. 1889	JERSEY, THE RIGHT HON. THE EARL OF, G.C.B., G.C.M.G.	Middleton Park, Bicester, Oxon.
Jan. 1911	JOHNSTON, COLONEL SIR DUNCAN, R.E., K.C.M.G., C.B.	Branksome, Saffrons Road, Eastbourne.
July 1869	LEACH, LIEUT.-COL. SIR GEORGE	6, Wetherby Gardens, South Kensington, S.W.
Feb. 1871	ARCHIBALD, K.C.B.	
Apr. 1885	M'CLELLAN, JOHN B., THE REV., M.A.	Ruthven, The Avenue, Richmond, Surrey.

Date of Election and Transfer.	HONORARY MEMBERS.	Address.
A. Nov. 1888 H.M. Feb. 1906	MOULTON, THE RIGHT HON. LORD JUSTICE JOHN FLETCHER	57, Onslow Square, S.W.
Nov. 1905	ROGERS, JULIAN CLARKE	Creefleet, Cumberland Gate, Kew, S.W.
A. April 1879 H.M. Dec. 1892	SMITH, HIS HONOUR JUDGE LUMLEY, K.C.	25, Cadogan Square, S.W.
A. Dec. 1877 H.M. April 1906	SUTTON, THE HON. MR. JUSTICE HENRY	Royal Courts of Justice, Strand, W.C.
A. May 1886 H.M. Nov. 1905	WHEELER, HIS HONOUR JUDGE THOMAS WHITTENBURY, K.C. ..	32, Warwick Gardens, Kensington, W.

Total number of Honorary Members, 26.

Fellows.

The names of those Fellows who have qualified for the Class by Examination are distinguished thus*
 The names of those Fellows who have gained Prizes at the Institution Examinations are distinguished thus†

Date of Election and of Transfer.	FELLOWS.	Address.
Jan. 1889	ABBEY, JOE BURMAN, A.M.I.C.E.	34A, New Street, Huddersfield.
Jan. 1884	ABBOTT, ROBERT THOMAS G. ..	Whitley House, Malton, Yorkshire.
A. Nov. 1891 F. Jan. 1895	*ABRAMS, BENJAMIN PERCY ..	195, Belsize Road, Kilburn, N.W.
Sep. 1895	ADAIR, JOHN OLPHERT	Ballynoe, Tullow, Co. Carlow.
Oct. 1897	ADAM, THOMAS	27, Union Street, Glasgow.
Feb. 1884	ADAMS, HENRY, M.I.C.E., M.I.M.E.	60, Queen Victoria Street, E.C.
A. Oct. 1897 F. Nov. 1901	*ADDIE, JOHN HEATHCOTE	Estate Office, Powis Castle, Welshpool, Montgomeryshire.
Dec. 1888	ADDIE, PETER	City Valuers Department, The Exchange, Corn Street, Bristol
Feb. 1881	ADDIE, WILLIAM FORRESTER ..	Powis Castle Estate Office, Welshpool, Montgomeryshire.
A. Oct. 1896 F. Oct. 1900	*ADDISCOTT, HENRY HUGH	32, Craven Street, Charing Cross, W.C.
A. Jan. 1888 F. Jan. 1891	*†ADKIN, BENAIAH WHITLEY ..	82, Victoria Street, S.W.
A. Dec. 1881 F. Nov. 1886	ADKIN, CHARLES DUNCAN	Wantage and Abingdon, Berks.
Feb. 1899	AITKEN, JOHN MALCOLM	Castlemilk Estates Office, Norwood, Lockerbie, Dumfriesshire.
Oct. 1908	AITKENHEAD, WILLIAM	Roughlands, Carron, Stirlingshire.
Sep. 1895	ALEXANDER, HENRY GEORGE SAMUEL, COLONEL	Derrygally, Moy, Co. Tyrone.
Feb. 1908	ALLAN, ROBERT	Halfway House, Whitburn, N.B.
A. Oct. 1898 F. Apr. 1902	*ALLSEBROOK, ARTHUR, B.S.C. (Edin.)	Link Elm, Malvern Link, Worcester-shire.
A. Oct. 1896 F. Dec. 1902	*AMBLER, SYDNEY WOOD	Estate Office, Sandbeck Park, Tickhill, near Rotherham, Yorkshire.
Oct. 1905	AMON, HERBERT	H.M. Naval Establishment, Rosyth, near Inverkeithing, N.B.
A. Nov. 1892 F. Nov. 1893	*AMOS, FRANK	3, The Parade, Canterbury, Kent.
Sep. 1895	ANDERSON, ALEX. CAREW	Ballymountain, Waterford.
Oct. 1897	ANDERSON, ROBERT	Property Agent, 95, Bath Street, Glasgow.
A. Jan. 1881 F. Mar. 1884	ANDERSON, ROBERT	The Barton, Cirencester.
Dec. 1889	ANDREW, THOMAS HAWKES ..	Northwood, Minehead, Somerset.
May 1890	ANDREWS, JOHN	13, Basinghall Street, E.C.
A. Oct. 1898 F. Feb. 1900	*ANGEL, FRANCIS HOUGHTON ..	7, Wolseley Gardens, Gunnersbury, W.
A. Nov. 1889 F. Nov. 1892	*ANSCOMBE, ERNEST	County Buildings, College Court, Gloucester.
Oct. 1909	ANTHONY, ERNEST JOHN	95, Lower Leeson Street, Dublin.

† Special Sanitary Science Certificate.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
3953	A. Oct. 1902 F. Sep. 1903	*APPLEBY, JOHN HENRY JAMES..	Corona, Chester Road, Northwood Middlesex.
4886	Oct. 1906	*APPS, BENJAMIN CHARLES..	Kingsley Green, near Haslemere, Surrey.
2649	A. Oct. 1894 F. Mar. 1896	*†SARIS, JOHN WHITTON, M.A. (Oxon)	1, Cricklewood Broadway, Cricklewood N.W.
1133	Apr. 1884	ARMISTEAD, RICHARD, A.M.I.C.E.	10, Booth Street, Bradford, Yorkshire.
2745	Sep. 1895	ARMSTRONG, ALEXANDER MOORE, CAPT.	Culmore House, Kilrea, Co. Londonderry.
3005	Jan. 1896	ARMSTRONG, ELLIOTT GRAHAM, B.A. (Dublin)	Rent Office, Ahascragh, Ballinasloe Co. Galway, Ireland.
5590	Oct. 1909	ARMSTRONG, REGINALD GRAVES	Estate Office, Shelton Abbey, Arklow Co. Wicklow.
791	Apr. 1882	ARMSTRONG, THOMAS JOHN ..	14, Hawthorn Terrace, Newcastle-on-Tyne.
1730	Feb. 1890	ARMYTAGE, SIR GEORGE, BART.	Kirklees, Brighouse, Yorkshire.
3042	A. June 1896 F. Nov. 1900	*ARNO, SAMUEL	67, Dunsmure Road, Stamford Hill, London.
1505	Dec. 1888	ARNOLD, FRANCIS	Chilland, Winchester, and Hambledon Hants.
1280	A. Dec. 1885 F. Jan. 1896	*§ARNOTT, JOHN	Church Street, Woodbridge, Suffolk.
1541	Jan. 1889	ASHDOWN, AUGUSTUS HARDING	Uppington, Wellington, Salop.
3075	A. Oct. 1896 F. Oct. 1898	*ASHENDEN, LEONARD THOMAS..	The Kent Fire Office, 29, Westgate Canterbury, Kent.
1750	A. Feb. 1890 F. July 1901	*†ASSITER, HARRY G.	9, John St., Adelphi, W.C., and The Weald House, Harrow Weald, Middlesex.
2151	Nov. 1891	AULT, EDWIN	47, Victoria Street, Westminster, S.W.
3785	A. Oct. 1901 F. Oct. 1907	*AUSTIN, FRANK HOLMAN	Church Hill, Epping, Essex.
1408	A. Dec. 1887 F. Oct. 1891	*AUSTIN, RICHARD	Bishop's Waltham, Hants.
1878	A. Nov. 1890 F. May 1903	*AYLEN, CECIL HUGH	Huntingdon Lodge, Benhill Road Sutton, Surrey.
1913	Jan. 1891	AYNSLEY, ROBERT JOHN	Fencer Hill, Gosforth, Newcastle-on-Tyne.
4598	Oct. 1905	BACON, FREDERICK JOSEPH ..	Rating Department, Treasury, S.W.
1915	Jan. 1891	BACON, HORACE	Attleborough, Norfolk.

† Special Sanitary Science Certificate.

‡ Special Forestry Certificate.

Date of Election and of Transfer.	FELLOWS.	Address.
A. Nov. 1868 F. Feb. 1887	BADCOCK, PHILIP	5, Great College Street, Westminster Abbey, S.W.
A. Oct. 1897 F. Nov. 1901 Oct. 1900	*BADDELEY, BERNARD BERESFORD BAGOT, LEWIS BROWN, CAPTAIN	99, Gresham Street, E.C. 2, Woodhill Villas, Tivoli, Cork.
A. Oct. 1893 F. Feb. 1896	*BAILEY, LOUIS HEWITT	Mereside, White Knight's Road, Reading
A. Oct. 1901 F. Sep. 1906	*BAILEY, PERCIVAL HENRY ASHBY	Valuers' Department, Prudential Chambers, Lichfield Street, Wolverhampton, Staffs.
May 1891	BAILEY, WILLIAM SMITH	4, Kirkgate, Newark-upon-Trent.
Sep. 1895	BAILLIE, JOHN ROBERT, LT.-COL.	Abercorn Estate Office, Strabane, Co. Tyrone.
Nov. 1891	BAINES, MATTHEW TALBOT, M.A. (<i>Cantab.</i>)	4, Whitehall Place, S.W.
Oct. 1905	BAKER, ERNEST JOHN	H.M. Dockyard Extension, Simonstown, South Africa.
Sep. 1895	BALDWIN, CHAMBRE CORCOR THOMAS	
A. Jan. 1890 F. Dec. 1891	*BALL, WILLIAM ALFRED	2, Pall Mall East, Charing Cross, S.W.
A. Oct. 1902 F. Oct. 1909	*BAMFORD, WALTER HERBERT . .	Valuers' Department, Somerset House, W.C.
A. Nov. 1890 F. Nov. 1893	*BANCROFT, FREDERICK HERBERT	78, King Street, Manchester.
A. Oct. 1895 F. Feb. 1901	*BANKS, FREDERICK STUART ANGUS	Lloyd's Bank Chambers, Leicester.
Nov. 1891	BANKS, JOHN	Kendal, Westmorland.
Oct. 1907	BANKS, JOHN WILLIAM	H.M. Office of Works, Storey's Gate, S.W.
Feb. 1881	BANNISTER, THOMAS	Limehurst, Hayward's Heath, Sussex.
Jan. 1882	BARFIELD, FREDERIC HENRY . .	18, Parkhurst Road, Sutton, Surrey.
Oct. 1903	*BARKER, CHARLES	96, Ladywell Road, Lewisham, S.E.
A. Oct. 1899 F. July 1901	*BARKER, FREDERICK GEORGE . .	Boldrewood, King Edward's Grove, Teddington, Middlesex.
A. Nov. 1892 F. Nov. 1898	*BARKER, GEOFFREY LIONEL . .	Teigngrace House, Teigngrace, Newton Abbot, Devonshire.
Mar. 1891	BARKER, HORACE RICHARD . .	13, Lowndes Street, Belgravia, S.W.
A. Dec. 1889 F. June 1891	*BARNES, GEORGE FREDERICK . .	New Square, Chesterfield, Derbyshire.
Dec. 1883	BARNES, JOHN WILLIAM JAMES	Albion Chambers, King St., Nottingham.
Oct. 1899	BARNES, WILLIAM ARTHUR, B.A. (<i>Dublin</i>)	Westland, Kells, Co. Meath.
A. Oct. 1898 F. Oct. 1899	*BARNES, STEPHEN ALLEN	4, Adam Street, Adelphi, W.C.
A. Oct. 1909 F. June 1911	*BARR, JAMES	21, West George Street, Glasgow.
Oct. 1906	BARRETT, JAMES	H.M. Office of Works, Storey's Gate, S.W.
Sep. 1895	BARRINGTON, JOHN BEATTY . .	Barrington Street, Limerick.
May 1891	BARTON, HARRY HOWELL	57, Sandgate Road, Folkestone, Kent.
Sep. 1895	BARTON, HENRY DUPRE MALKIN	The Bush, Antrim, Ireland.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2562	Oct. 1893	BARTON, SIR JOHN GEORGE, C.B.	General Valuation and Boundary Survey Office, 6, Ely Place, Dublin.
3642	A. Oct. 1900 F. Nov. 1901	*BASLEY, HAROLD PULLAM. . . .	163, North Street, Brighton.
1986	Mar. 1891	BATEY, HENRY SIMPSON	51, King Street, Manchester.
726	Feb. 1882	BATH, FRED, F.R.I.B.A. . . .	Crown Chambers, and Sandown House, Church Fields, Salisbury.
1918	Jan. 1891	BATHER, JOHN T.	9, The Square, Shrewsbury.
3454	Feb. 1899	BATHGATE, CHARLES S. . . .	26, Bellgrove Street, Glasgow.
2161	Nov. 1891	BATSTONE, ROWLAND ROBERT. .	110, Cannon Street, E.C.
1580	Feb. 1889	BATTERBURY, THOMAS, F.R.I.B.A.	Birkbeck Bank Chambers, Chancery Lane, W.C.
3346	A. Oct. 1898 F. Nov. 1901	*BAVERSTOCK, HAROLD BRIDGE. .	Godalming, Surrey.
4364	A. Oct. 1904 F. Jan. 1905	*BAXENDALE, FREDERICK GIESEN	27, Hawes Road, Bromley, Kent.
2481	Feb. 1892	BAXTER, GEORGE	1, Frederick's Place, E.C.
5329	Feb. 1908	BAXTER, JOHN	243, St. Vincent Street, Glasgow.
1881	A. Nov. 1890 F. Feb. 1898	*BEADEL, MAURICE FREDERICK. .	97, Gresham Street, E.C.
2163	Nov. 1891	BEALE, ROBERT J., A.R.I.B.A. . .	17, Old Queen Street, Westminster, S.
5585	Oct. 1909	BEALE, SYDNEY BENJAMIN . .	Sutton House, Brighton Road, Sutton, Surrey.
2753	Sep. 1895	BEAMISH, WILLIAM HENRY . .	2, South Mall, Cork.
1282	A. Dec. 1885 F. Nov. 1889	*BEARD, EDWIN THOMAS, M.I.C.E.	Hill House, Walmer, Kent.
4109	A. Feb. 1903 F. Jan. 1910	*BEASLEY, THOMAS CALVERT PLATT	Harston, Grantham, Lincolnshire.
5821	Feb. 1910	BEATTIE, GEORGE LENNOX . .	136, George Street, Edinburgh.
3292	Feb. 1898	BEATTIE, WILLIAM HALDEN . .	40, Murrayfield Avenue, Edinburgh.
2164	Nov. 1891	BECK, ARTHUR CLEMENT . .	North Runciton, King's Lynn, Norfolk.
1457	Feb. 1888	BECK, EDWARD WILLIAM . .	16, Bank Street, Norwich.
5591	Oct. 1909	BECKETT, W. FRANK	10, Leinster Street, Dublin.
1561	Jan. 1889	BECKWITH, HENRY LANGTON . .	3, Cook Street, Liverpool.
4133	A. Oct. 1903 F. June 1910	*BEDDALL, HERBERT BOWMAN, N.D.A.	29, Lemon Street, Truro.
959	A. May 1883 F. May 1887	*BEDELLS, CHARLES HERBERT . .	6, John Street, Bedford Row, W.C.
2651	A. Oct. 1894 F. May 1903	*BEKEN, GEORGE KINGSNORTH. .	73, Moorgate Street, E.C.
1594	A. Feb. 1889 F. Dec. 1895	*BELCHER, EDWARD JOHN. . .	Wantage, Berks.
3790	A. Oct. 1901 F. Nov. 1905	*BELL, ALBERT HENRY. . . .	Wonston, Addlestone, Surrey.
3320	Oct. 1898	BELL, ANDREW WALKER. . .	St. Margaret's Hall, Dunfermline.
5330	Feb. 1908	BELL, GEORGE	212, St. Vincent Street, Glasgow.
1453	Feb. 1885	BELL, JOSEPH ASKEW. . . .	Rufford Estate Office, Ollerton, Nottingham.
1662	A. Dec. 1889 F. Apr. 1894	*BELLINGHAM, ARCHIBALD TURNER	Seaford House, Belgrave Square, S.
388	Mar. 1875	BENNETT, THOMAS OATLEY . .	19, Richmond Road, Bayswater, W.
3348	A. Oct. 1898 F. Sep. 1904	*BERRY, CHARLES WINDSOR . .	51, North John Street, Liverpool.

Date of Election and of Transfer.	FELLOWS.	Address.
9 A. Oct. 1898 F. Nov. 1905	*BETENSON, FREDERIC ROGER ..	13, Great James St., Bedford Row, W.C.
4 Dec. 1883	BETRIDGE, EDWARD	28, Waterloo Street, Birmingham.
0 A. Oct. 1898 F. Oct. 1905	BETRIDGE, JOHN CHARLES LEBON	Admiralty Works Department, H.M. Dockyard, Malta.
5 A. Nov. 1892 F. Oct. 1894	*BEVEN, SEPTIMUS	Moorfields Chambers, 95, Finsbury Pavement, E.C.
0 Mar. 1869	BIDWELL, CHAS., M.A. (<i>Cantab.</i>) (<i>Past-President</i>)	Ely, Cambridgeshire.
5 A. Feb. 1894 F. Feb. 1896	*BIDWELL, JOHN EVANS, M.A. (<i>Cantab.</i>)	10, Barton Road, Cambridge.
7 A. Oct. 1897 F. May 1900	*BIDWELL, PHILLIP SHELFORD ..	St. Mary's Street, Ely, Cambridgeshire.
7 Oct. 1898	BILLINGHAM, JOHN ALFRED LAWRENCE, CAPTAIN	Royal Engineer Office, Western Heights, Dover.
7 Nov. 1891	BILSON, JOHN, F.R.I.B.A.	23, Parliament Street, Hull, Yorkshire.
9 May 1891	BINGHAM, ALFRED JOHN	Nalder Hill House, Newbury, and 5, Bolton Street, Piccadilly, W.
9 Jan. 1891	BINGHAM, FREDERICK HENRY ..	5, Bolton Street, Piccadilly, W.
31 Oct. 1863	BINNIE, THOMAS (<i>Vice-President</i>)	207, Hope Street, Glasgow.
21 Oct. 1898	BINNIE, THOMAS, JUN.	207, Hope Street, Glasgow.
34 A. Oct. 1895 F. Oct. 1900	*BIRCH, FRANCIS JULIAN LAURENCE	Upper Bordean, Petersfield, Hampshire.
69 A. Oct. 1893 F. Apr. 1895	*BIRCH, RICHARD ELWYN, B.A. (<i>Cantab.</i>)	Bryncelyn, St. Asaph, Flintshire.
30 A. Dec. 1886 F. Nov. 1889	*BIRCH, WALTER DE HOGHTON ..	Hoghton Estate Office, Walton Hall, Preston, Lancashire.
36 Nov. 1888	BIRD, JAMES BINFIELD	Kingswood, Sandown, Isle of Wight.
54 May 1884	BIRD, WALTER	24, Wynnstay Gardens, Kensington, W.
51 A. Jan. 1887 F. Feb. 1889	BIRKETT, TOM	Foxton House, Penrith, Cumberland.
94 May 1890	BISHOP, CHARLES	Regent Circus, Swindon, Wilts.
63 Oct. 1893	*BLACKBOURN, HENRY	8, Claremont Road, Tunbridge Wells, and 14, John Street, Bloomsbury, W.C.
26 Dec. 1886	BLACKFORD, ARTHUR	61 and 62, Chancery Lane, W.C.
54 Sep. 1895	BLACKLEY, TRAVERS ROBERT ..	Drumbar, Cavan, Ireland.
55 Feb. 1899	BLAIR, ALEXANDER	30, George Square, Glasgow.
00 A. Oct. 1897 F. June 1898	*†BLAKE, EDWIN HOLMES	82, Victoria Street, S.W.
32 Mar. 1885	BLAKE, FREDERICK	46, Commercial Road, Portsmouth, Hants
53 Feb. 1883	BLAKE, WILLIAM JOHN	45, High Street, Croydon, Surrey.
39 Nov. 1891	BLENCOWE, GEORGE	Bury St. Edmunds, Suffolk.
70 Nov. 1891	BLETSON, HENRY HOPKINSON ..	Thrapston, Northamptonshire.
45 A. Oct. 1900 F. Nov. 1901	*BLISS, THOMAS CUSHWAY	106, Cheapside, E.C.
38 Mar. 1891	BLIZARD, JOHN HENRY, A.M.I.C.E.	Lansdowne House, Castle Lane, Southampton.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
511	A. May 1878 F. Mar. 1887	BLOSSE, EDWARD F. LYNCH ..	Charles Street Chambers, Cardiff, and Coytrehen Estate Office, Aberken S.O., S. Wales.
2935	A. Oct. 1895 F. July 1905	*BLOUNT, EDWARD	4, Frederick's Place, E.C.
4139	A. Oct. 1903 F. Dec. 1910	*BLUNT, FRANCIS EDWARD ..	Valuation Department, Inland Revenue 12, St. John's Lane, Liverpool.
3154	A. Feb. 1897 F. May 1900	*BLUNT, MONTAGUE CECIL ..	33 and 34, Savile Row, W.
4372	A. Oct. 1904 F. Sep. 1905	*BODDINGTON, PERCY EDGAR ..	Inland Revenue, 51, Queen Street Exeter.
1882	A. Nov. 1890 F. Aug. 1893	*BODY, ARTHUR, A.R.I.B.A. ..	48, Corn Street, Bristol, and 12, Prince Square, Plymouth, Devon.
331	Feb. 1874	BOLAM, CHARLES GODFREY ..	Dunchurch, Rugby, Warwickshire, and 82 and 83, Palace Chambers, S.W.
408	Dec. 1875	BOLDEN, JOHN LEONARD, M.A. (Cantab.)	Duchy of Lancaster Office, Lancaster Place, W.C.
5592	Oct. 1909	BOLTON, SAMUEL H.	34, Westland Row, Dublin.
2060	May 1891	BOND, DOUGLAS VALE	22, Surrey Street, Strand, W.C.
199	May 1869	BOND, ERASMUS	Broadlands, St. George's Avenue, Weybridge, Surrey.
813	May 1882	BOOKER, ALGERNON ERSKINE ..	Albion House, Hyde Park Square, W.
3502	Oct. 1899	*BOOKER, FRANK WILLIAM ..	Valuer's Office, Inland Revenue Nottingham.
2653	A. Oct. 1891 F. Nov. 1895	*BOOTH, GILBERT WILLIAM ..	45 and 46, Chandos St., Charing Cross W.C.
1883	A. Nov. 1890 F. June 1891	*BOULTING, FREDERICK EDWARD	182, Oxford Street, W.
3647	A. Oct. 1900 F. June 1906	*BOURCHIER, CLAUD J... ..	Charleville Estate Office, Tullamore King's Co.
1795	May 1890	BOURNE, ROBERT ELLIOTT ..	Elwell, Totnes, Devon.
3201	A. Oct. 1897 F. Dec. 1902	*BOWDEN, HARRY	Wilts and Dorset Bank Chambers George Street, Plymouth.
2134	A. May 1891 F. Nov. 1899	*BOWDEN, JOHN FRIENDSHIP ..	Bedford Chambers, Exeter.
2173	Nov. 1891	BOWDICH, JOHN	Canfield, Church End, Finchley, N.
1777	Apr. 1890	BOWDITCH, HENRY	103, George Street, Croydon.
1778	Apr. 1890	BOWLEY, JOHN CROSS	25, Hyde Gardens, Eastbourne.
3185	Oct. 1897	BOXSHALL, HENRY EDWIN, MAJ.	Royal Engineer Office, Colombo, Ceylon.
1685	Jan. 1890	BOYD, JOHN JERMYN	Heath View, Weybridge, Surrey, and Estate Offices, Hamilton Place, W.
3961	A. Oct. 1902 F. May 1905	*BOYTON, BERTRAM ALFRED ..	60, Coleman Street, E.C.
1325	Nov. 1886	BRACKETT, ARTHUR WILLIAM ..	27, High Street, Tunbridge Wells, Kent.
1884	A. Nov. 1890 F. May 1892	*BRACKETT, FREDERICK HENRY ..	27, High Street, Tunbridge Wells, Kent.
870	Jan. 1883	BRACKETT, WILLIAM	27, High Street, Tunbridge Wells, Kent.
3202	A. Oct. 1897 F. Apr. 1902	*BRACKETT, WILLIAM NEWBEGIN	Market Place, Retford, Nottinghamshire.

Date of Election and of Transfer.	FELLOWS.	Address.
A. Dec. 1888 F. Nov. 1893	*BRADY, RALPH HOLLINSHED ..	17, Warren Street, Stockport, Cheshire, and 42, John Dalton St., Manchester.
Dec. 1887	BRAILSFORD, HENRY	Park Nook, near Derby.
A. Oct. 1902 F. Apr. 1911	*BRAMLEY, FRANCIS HERBERT ..	The White Building, Fitzalan Square, Sheffield.
Jan. 1888	BREACH, BENJAMIN PANSON..	29, Fleet Street, E.C.
A. Oct. 1902 F. Oct. 1909	*BREALEY, REGINALD WOOD- HOUSE	Daisy Bank, Leek, Staffordshire.
Oct. 1895	*BREEDS, ARTHUR OWEN	Portugal Street Buildings, 26, Portugal Street, Lincoln's Inn Fields, W.C.
Feb. 1882	BRERETON, FRANC SADLEIR, F.R.I.B.A.	292, High Holborn, W.C.
Nov. 1891	BRERETON, THOMAS BLOOMFIELD SADLEIR	292, High Holborn, W.C.
Oct. 1909	*BRESSEY, CHARLES HERBERT..	70 & 71, Bishopsgate Street Within, E.C.
Jan. 1891	BRIANT, ROBERT.. .. .	200, Kennington Park Road, S.E.
Oct. 1903	*BRICKWELL, ALFRED JAMES ..	Surveyor's Office, Great Northern Rail- way, King's Cross, N.
Sep. 1895	BRIDGE, HENRY POWELL	Racket Hall, Roscrea, Tipperary.
Feb. 1887	BRIDGFORD, ERNEST JAMES ..	65, King Street, Manchester.
A. Oct. 1900 F. Jan. 1911	*§BRIERLEY, HUGH COLLEY ..	City Surveyor's Office, Town Hall, Manchester.
Oct. 1904	*BRIGGS, ARTHUR.. .. .	9, Albert Square, Manchester.
A. Oct. 1896 F. Feb. 1900	*BRIGHTON, GEORGE LAWRENCE	21, Queen Anne's Gate, Westminster, S.W.
A. Nov. 1892 F. Jan. 1896	*BRINKWORTH, ROBERT EDWIN..	16, Old Bond St., Bath, Somersetshire, and Chippenham, Wiltshire.
A. Oct. 1894 F. Mar. 1899	*BRINSLEY, HERBERT GEORGE WILLIAM	30 and 31, New Bridge Street, E.C.
A. Oct. 1903 F. Oct. 1909	*BROADBENT, WILLIAM	Red Hall Chambers, Guildford St., Leeds
Sep. 1895	BROADLEY, EDWARD BARRY, MAJOR	73, South Mall, Cork.
Nov. 1891	BROCKLEBANK, JOHN	58A, Yorkshire Street, Rochdale, Lanca- shire, and Todmorden, Yorkshire.
Nov. 1891	BRODRICK, FREDERICK STEAD ..	York Chambers, Lowgate, Hull.
A. Oct. 1904 F. Nov. 1909	*BROOK, HARRY	59 & 60, West Stockwell St., Colchester
Mar. 1891	BROOKS, CHARLES WILLIAM, A.R.I.B.A.	Vernon House, Sicilian Avenue, Blooms- bury Square, W.C.
A. Oct. 1895 F. Nov. 1897	*BROOKS, JOHN McMULLEN.. ..	4, Queen Victoria Street, E.C.
A. Oct. 1895 F. Mar. 1899	*BROOKS, PHILIP FULLER	4, Queen Victoria Street, E.C.
Nov. 1890	BROSTER, ROBERT BUCK	Craven Bank Chambers, North Street, Keighley, Yorkshire.
A. May 1891 F. May 1893	*BROWN, ALEXANDER BURNETT..	Amberley House, Norfolk Street, Strand W.C.
A. Oct. 1898 F. Mar. 1903	*BROWN, ARTHUR ALLEN	83, High Street, Croydon, Surrey.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
3456	Feb. 1889	BROWN, CHARLES	Kerse Estate Office, Falkirk, Stirlingshire.
1500	Nov. 1888	BROWN, FRANK JOHN	Tring, Herts.
3081	A. Oct. 1896 F. July 1902	*BROWN, FREDERICK	London County Council, Spring Gardens, S.W.
2507	A. Nov. 1892 F. Jan. 1899	*BROWN, GEORGE TURVILLE ..	11, Little College St., Westminster, S.W.
5094	Oct. 1907	*BROWN, REGINALD	Town Hall, Southall, Middlesex.
2061	May 1891	BROWN, WILLIAM	63, John Street, Glasgow.
4379	A. Oct. 1904 F. June 1911	*BROWN, WILLIAM ERNEST ..	39, Pepper Street, Chester.
3967	A. Oct. 1902 F. Jan. 1904	*BROWN, WILLIAM HENRY ..	40, Fawnbrake Avenue, Herne Hill, S.W. and 19, Craven Street, Strand, W.C.
2761	Sep. 1895	BROWNE, ERNEST H. ..	Brookfield, Tullamore, King's County.
1142	A. Apr. 1884 F. Apr. 1890	BROWNE, FLINT	30, Watling Street, E.C.
2763	Sep. 1895	BROWNLOW, CLAUDE	Estate Office, Coolderry, Carrickmacross, Co. Monaghan.
1046	A. Jan. 1884 F. Mar. 1890	BRUCE, ROBERT KNIGHT	5, Essex Villas, Camden Hill, W.
3945	Oct. 1902	BRUNICARDI, DOMINIC N. ..	Valuation Office, 6, Ely Place, Dublin.
3517	A. Oct. 1899 F. June 1909	*BRUTON, BASIL VASSAR	Albion Chambers, King Street, Gloucester.
2482	Feb. 1892	BRUTON, HENRY WILLIAM ..	Albion Chambers, Gloucester.
3500	Oct. 1899	BRYANT, GEORGE HERBERT, CAPT.	Royal Engineer Office, Malta.
1291	Jan. 1886	BRYDON, ROBERT	The Dene, Seaham Harbour, Durham.
1542	Jan. 1889	BUCK, HERBERT WILSON ..	Pierpoint Street, Worcester.
1284	A. Dec. 1885 F. Jan. 1889	*BUCKLAND, ALFRED VIRGOE ..	8, Frederick's Place, Old Jewry, E.C.
270	Dec. 1871	BUCKLAND, FRANK BOWRY ..	Windsor, Berks.
1684	Jan. 1890	BUCKLAND, HENRY DUNEAU ..	4, Bloomsbury Sq., W.C., and Windsor, Berks.
2136	A. May 1891 F. Oct. 1894	*BUCKLAND, SIDNEY CRAWFORD ..	4, Bloomsbury Square, W.C., and Windsor, Berks.
1835	Nov. 1890	BUCKLEY, GEORGE	Tower Chambers, Halifax, Yorkshire.
2182	Nov. 1891	BULL, WALTER	35, Old Jewry, E.C.
3203	A. Oct. 1897 F. Nov. 1900	*BURGESS, HENRY HERBERT PHILIP	c.o. United Kingdom Provident Institution, 196, Strand, W.C.
2764	Sep. 1895	BURKE, HENRY ANTHONY ..	Drumkeen, Ballinamallard, Co. Fermanagh.
2765	Sep. 1895	BURKE, WILLIAM CREAGHE ..	Clonne, Ballinrobe, Co. Mayo.
4925	A. Oct. 1906 F. Apr. 1911	*†BURKETT-SMITH, CECIL SYDNEY	31, St. Mary Abbott's Terrace, Kensington, W.
1796	May 1890	BURMESTER, JOHN WILLIAM STANLEY, F.R.I.B.A.	13, Queen Anne's Gate, Westminster, S.W.
2183	Nov. 1891	BURNET, FRANK	180, Hope Street, Glasgow.
1797	May 1890	BURNETT, ALFRED ANDREW ..	2, High Street, Southampton, and Shawford, Hants.
635	Dec. 1881	BURNETT, SIR DAVID	99, Gresham Street, E.C.
1625	May 1889	†BURNETT, GEORGE JOHN MULCASTER, M.A. (<i>Cantab.</i>)	Elstree Cottage, Elstree, Herts.

Date of Election and of Transfer.	FELLOWS.	Address.
A. Oct. 1902 F. Sep. 1904 C.P. June '98 F. June 1897	*BURNETT, JOHN BURNS, GAVIN JAMES, B.Sc. (Lond.)	Gopsall, Atherstone, Warwickshire. Building Works Department, Royal Arsenal, Woolwich, Kent.
A. Feb. 1904 F. Feb. 1906 A. Oct. 1900 F. Dec. 1901	BURR, EDMUND JOHN *†BURR, HARRY	5, Queen Square, Bloomsbury, W.C. Estate Office, Letchworth, near Hitchin, Hertfordshire.
A. Oct. 1905 F. Apr. 1908 A. Oct. 1898 F. Jun. 1904	*BURR, THOMAS ARNOLD *BURROUGHES, CHARLES FITZPATRICK	5, Queen Square, Bloomsbury, W.C. Estate Office, Quidenham, Attleborough, Norfolk.
Feb. 1875	BURROUGHES, THOMAS HENRY . .	37, Lincoln's Inn Fields, W.C., and 16, Lower Berkeley Street, W.
A. Dec. 1886 F. Jan. 1890	*BURROWS, ALFRED JOHN	41, Bank Street, Ashford, Kent.
Dec. 1884	BURTENSCHAW, ALBERT	Hailsham, Sussex.
A. Oct. 1898 F. July 1901	*BURTENSCHAW, ALBERT KING . .	Hailsham, Sussex.
A. Oct. 1895 F. Jan. 1897	*BURTON, AMOS, A.M.I.C.E. . . .	Borough Engineer, Town Hall, Stoke-upon-Trent, Staffordshire.
A. Oct. 1898 F. Sep. 1902	*BURTON, REGINALD ROBERT . .	London County Council, Spring Gardens, S.W.
Oct. 1909	BURY, JOSHUA	8, John Dalton Street, Manchester.
A. Dec. 1887 F. May 1891	*BUSHELL, HENRY	33, New Bridge Street, E.C.
A. Oct. 1894 F. Nov. 1899	*BUTLER, ALBERT ERNEST	28, Broad Street, Wokingham, Berkshire.
A. Oct. 1897 F. May 1900	*BUTLER, CHARLES	18, Queen Street, Huddersfield, Yorkshire
Sep. 1895	BUTLER, WALTER SELBY	Green Mount, Castle Bellingham, Co. Louth.
A. Oct. 1901 F. Nov. 1906	*CABLE, CHARLES VINCENT	The Turret, Hartley Wintney, Hampshire.
Nov. 1891	CABLE, JAMES M., A.R.I.B.A. . .	56, Ludgate Hill, E.C.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
1638	Dec. 1889	CESAR, CHARLES EDWARD ..	105, Tooley Street, Southwark, S.E.
2185	Nov. 1891	CALVERT, ARTHUR RICHARD ..	18, Low Pavement, Nottingham.
5331	Feb. 1908	CAMERON, ANGUS	Benmore, Kilmun, Argyllshire.
1798	May 1890	CAMPBELL, HENRY HUNTER ..	11, Old Hall Street, Liverpool.
2942	A. Oct. 1895 F. Dec. 1896	*CAMPBELL, HUGH BRUCE ..	Brooklands, Leamington, Warwicksh.
4110	A. Feb. 1903 F. Sep. 1904	*CANCH, THOMAS RICHARD ..	3, Greenbank Crescent, Morningside Edinburgh.
3969	A. Oct. 1902 F. Dec. 1901	*CANDY, WALTER EMMANUEL ..	Encombe, Wareham, Dorset.
1377	Mar. 1887	CANNING, WILLIAM BROWNE ..	Salisbury, Wiltshire.
2659	A. Oct. 1894 F. Jan. 1899	*CARNELL, SYDNEY GEORGE ..	Public Rooms, Truro.
800	A. Apr. 1882 F. Jan. 1883	CARPENTER, EVAN GEORGE ..	4, Wellesley Court Road, Croydon.
2767	Sep. 1895	CARROLL, THEODORE FREDERICK	80, South Mall, Cork.
2769	Sep. 1895	CARSON, WILLIAM B. .. .	Brookfield, Malahide, Co. Dublin.
2943	A. Oct. 1895 F. Nov. 1898	*CARTWRIGHT, ALFRED STOTT ..	Council Office, Wilmslow, Cheshire.
2188	Nov. 1891	CARTWRIGHT, JOSHUA, M.I.C.E. .	21, Parsons Lane, Bury, Lancashire.
1991	Mar. 1891	CASTELL, CHARLES SMITH .. .	2, Pont Street, Belgrave Square, S.W.
1603	Mar. 1889	CASTLE, ARTHUR	11, King Edward Street, Oxford.
1201	A. May 1884 F. Nov. 1887	CASTLE, SYDNEY CHARLES COURTENAY, A.I.C.E.	37, Outer Temple, 222, Strand, W.C. and St. Aubyn's Close, Whitwor Road, South Norwood, S.E.
278	Mar. 1872	CASTLE, WILLIAM HENRY BALDWIN	40, Chancery Lane, W.C.
362	Jan. 1875	CAVE, HENRY H.	Estate Office, Rugby, Warwickshire
1480	Apr. 1888	CAVE, THOMAS NEWMAN .. .	Horton, Northamptonshire.
1836	Nov. 1890	CHALK, HENRY PHILIP .. .	Linton, Cambridgeshire.
3155	A. Feb. 1897 F. June 1899	*CHAMBERLAIN, GEORGE ARTHUR RADDON	Whitegates, Enville, near Stourbridge Worcestershire.
2660	A. Oct. 1894 F. Feb. 1896	*CHAMBERS, THEODORE GERVASE	7, Hertford Street, Mayfair, W.
2770	Sep. 1895	CHAMBRÉ, C. B. M.	Northland Row, Dungannon, Co. Tyrone
4609	Oct. 1905	*CHAMPION, PHILIP	The Downs, Darenth, Dartford, Kent
219	Jan. 1870	CHANCELLOR, FRED, F.R.I.B.A. .	Chelmsford, Essex.
3972	A. Oct. 1902 F. June 1905	*CHANDLER, JOHN	Valuer's Office, 1, Alexandra Villa Finsbury Park, N.
3147	Feb. 1897	CHAPMAN, GEORGE JAMES, CAPT.	Royal Engineer Office, Vacoas, Ma ritius.
4882	Oct. 1906	CHAPPELL, FRANK RICHARDSON	H.M. Office of Works, S.W., and 15 Stapleton Hall Road, Stroud Green,
5377	Oct. 1908	*CHARLES, ARTHUR	Noseley Estate, Billesdon, Leicester.
1800	May 1890	CHARLES, RICHARD STAFFORD ..	Pinnors Hall, Austin Friars, E.C.
3016	A. Jan. 1896 F. Nov. 1901	*CHART, CHRISTOPHER	Union Bank Chambers, Croydon.
1768	Mar. 1890	CHART, ROBERT MASTERS .. .	The Vestry Hall, Mitcham, Surrey.

	Date of Election and of Transfer.	FELLOWS.	Address.
0	Nov. 1891	CHASEMORE, PHILIP	Ashleigh, Horsham, Sussex.
2	A. Oct. 1898 F. Nov. 1901	*CHATTELL, FRANCIS LORiot ..	Lower Camden, Chislehurst, Kent.
1	Sep. 1895	CHATTERTON, ROBERT SMITH ..	Belmont, Raheny, Co. Dublin.
1	Oct. 1910	*CHEEKE, WILLIAM ALEXANDER	Lincoln Chambers, Lincoln Place, Dublin.
5	A. Dec. 1888 F. Oct. 1910	CHENEY, EDWIN JOHN, M.A., M.R.A.C.	4, Whitehall Place, S.W.
13	A. Oct. 1898 F. June 1904	*CHESTERTON, FRANK SIDNEY ..	52 and 53, Cheapside, E.C.
56	A. Oct. 1900 F. Dec. 1904	*CHESTERTON, SIDNEY JAMES ..	116, Kensington High Street, W.
55	Mar. 1890	CHESTERTON, SIDNEY RAWLINS..	116, Kensington High Street, W.
12	Mar. 1891	CHESTON, HORACE, F.R.I.B.A. ..	5, Union Court, Old Broad Street, E.C., and Avondale, Wakehurst Road, West Side, Clapham Common, S.W.
92	Nov. 1891	CHETWOOD, STEPHEN	Waltham Abbey, Essex.
93	Nov. 1891	CHEW, HENRY VICTOR	Prospect House, Tom Throws, Hawk- hurst, Kent.
19	A. Oct. 1899 F. Oct. 1900	*CHICHESTER, RICHARD HERBERT	Upton-on-Severn, Worcestershire.
31	Feb. 1890	CHILD, FRED.. ..	65 and 66, Chancery Lane, W.C., and 1, Station Road, New Barnet, Hertford- shire.
58	Oct. 1896	CHILD, HENRY JOHN, MAJOR ..	Royal Engineer Office, Tidworth, Wilts.
57	July 1868	CHINNOCK, FREDERICK GEORGE (Member of Council)	11, Waterloo Place, S.W.
12	A. Feb. 1884 F. June 1891	CHRISTY, ARCHIBALD ERNEST ..	12, Great St. Helens, E.C.
45	O.F. Oct. '96 F. Apr. 1904	CLANCEY, JOHN CHARLES, K.I.H.	9, Windsor Road, Cantonments, Rangoon, Burma.
147	Jan. 1887	CLARE, EDWARD LOVELL	37, Park Square, Leeds, Yorkshire, 18, Water Street, Liverpool, & St. Stephen's House, Victoria Embankment, S.W.
47	A. Oct. 1903 F. Jan. 1909	*CLARK, HUDSON OWEN	73, Maison Dieu Road, Dover.
184	Feb. 1892	CLARK, JOHN McCCLARE	Haltwhistle & Hexham, Northumberland.
139	Dec. 1889	CLARK, NATHANIEL	Tanfield Hall, Tantobie, S.O., Co. Durham
164	A. Oct. 1898 F. July 1905	*CLARK, NATHANIEL, JUN... ..	Tanfield Hall, Tantobie, S.O., Co. Durham.
181	Jan. 1882	CLARK, SAMUEL	8, New Cavendish Street, W.
101	May 1890	CLARKE, CHRISTOPHER	Charlcot, Bedale, Yorkshire.
157	A. Oct. 1900 F. July 1905	*CLARKE, ERNEST SEYMOUR ..	2, Lancaster Place, Strand, W.C.
94	Mar. 1891	CLARKE, GEORGE ERNEST.. ..	12, Coleman Street, E.C.
74	A. Jan. 1884 F. Jan. 1886	CLARKE, HOWARD CHATFIELD, F.R.I.B.A. (Member of Council)	102, Bishopsgate, E.C.
108	Dec. 1888	CLARKE, JOHN WILLIAM	Guisborough, Yorkshire.
107	A. Dec. 1883 F. Nov. 1889	CLARKE, PERCY HENRY	2, Lancaster Place, W.C.
24	Jan. 1891	CLARKE, STANLEY CHATFIELD	107, Bishopsgate, E.C.

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2194	Nov. 1891	CLARKSON, JOHN, F.R.I.B.A. ..	Ormond Chambers, 28, Great Ormond Street, W.C.
1837	Nov. 1890	CLARKSON, WILLIAM	136, High Street, Poplar, E.
3210	A. Oct. 1897 F. Oct. 1900	*CLARKSON, WILLIAM, JUN... ..	9 and 10, Fenchurch Street, E.C., 13, High Street, Poplar, E., and 15, Bow Road, Bow, E.
4389	A. Oct. 1904 F. May 1910	*CLAY, WILLIAM HENRY CHRISTY, A.M.I.C.E.	Estate Office, Midland Railway, Derby.
5593	Oct. 1909	CLAYTON, JOHN GRAVES	18, Nassau Street, Dublin.
4148	A. Oct. 1903 F. June 1911	*CLEMENTS, CYRIL JOHN	11, Park Avenue, Mansfield, Notts.
1686	Jan. 1890	CLIFTON, JAMES EDWARD, F.R.I.B.A.	Swanage, Dorset.
1122	A. Mar. 1884 F. Jan. 1889	CLIFTON, WILLIAM EDWARD, F.R.I.B.A.	7, East India Avenue, Leadenhall Street, E.C.
1310	Mar. 1886	CLOUGH-TAYLOR, HORACE GEO.	39, Friar Lane, Leicester.
78	A. July 1868 F. May 1875	CLUTTON, JOHN HENRY	5, Great College Street, Westminster Abbey, S.W.
61	A. July 1868 F. Apr. 1874	CLUTTON, RALPH	5, Great College Street, Westminster Abbey, S.W.
221	A. Jan. 1870 F. Dec. 1875	CLUTTON, RALPH WILLIAM	Hartswood, Reigate, Surrey.
1235	A. Dec. 1885 F. May 1894	*COALES, HERBERT GEORGE, A.M.I.C.E.	Local Board Offices, Market Harborough.
4149	A. Oct. 1903 F. Oct. 1907	*COATES, PERCY BREVITT	Fairholme, North Curry, Taunton.
3973	A. Oct. 1902 F. Jan. 1903	*COBB, HENRY FREDERICK	Higham, Kent.
713	Jan. 1882	COBB, HERBERT MANSFIELD ..	Higham, Kent, and 53, Lincoln's Inn Fields, W.C.
3807	A. Oct. 1901 F. Nov. 1907	*COBB, ROBERT	Borstal Lodge, Rochester, Kent.
3661	A. Oct. 1900 F. July 1901	*COCHRANE, WILLIAM JAMES ..	15, Thornhill Terrace, Sunderland Durham.
2196	Nov. 1891	COCKS, SAMUEL ROGER	5, St. Thomas' St., Ryde, Isle of Wight.
3365	A. Oct. 1898	COLE, FRANCIS JOSEPH	Director of Works Department, Admiralty, Northumberland Avenue, W.C.
4601	F. Oct. 1903		
3976	A. Oct. 1902 F. Nov. 1908	*COLE, HERBERT COVINGTON ..	H.M. War Office, Whitehall, S.W.
3810	A. Oct. 1901 F. June 1911	*COLES, JAMES HATCH	Valuer's Department, 392, High Street, Rochester, Kent.
1839	Nov. 1890	COLES, SAMUEL HOOD COWPER (Member of Council)	Penmyarth, Crickhowell, S. Wales.
5842	Oct. 1910	*COLES, WALTER GEORGE	Scottish Office Engineering Dept., 1, George Street, Edinburgh.
769	A. Feb. 1882 F. Feb. 1884	COLGATE, THOMAS	Tide Mill House, Bishopstone, Lewes, Sussex.
5843	Oct. 1910	*COLLIER, HENRY HEWETT ..	69, Fleet Street, E.C.
1414	A. Dec. 1887 F. Feb. 1891	COLLINGHAM, JOHN CYRIL LEES	6, Mount Street, W.

No. of Election and of Transfer.	FELLOWS.	Address.
6 Oct. 1909	COLLINS, HERBERT WILLIAM ..	H.M. Office of Works, Storey's Gate, S.W.
16 A. Dec. 1882 F. Jan. 1891	COLLINS, MARCUS E.	61, Old Broad Street, E.C.
25 Jan. 1891	COLYER, FREDERICK, M.I.C.E. ..	Cromwell Lodge, West Street, Ryde, Isle of Wight.
62 May 1891	COMMIN, FREDERICK JAMES ..	5, Victoria Street, S.W.
26 Jan. 1891	CONDER, ALFRED, F.R.I.B.A. ..	Palace Chambers, 9, Bridge Street, S.W.
74 Oct. 1907	CONNOR, GEORGE HARRY ADAMS	Estates Office, Longniddry, N.B.
67 Oct. 1908	CONSTABLE, GEORGE WILLIAM ..	Traquair Estate Office, Innerleithen, N.B.
143 Oct. 1904	*COOK, FREDERIC WILLIAM.. ..	London County Council, 9, Spring Gardens, S.W.
564 Jan. 1889	COOKE, HENRY	Whittlebury, Antrim Street, Hampstead N.W.
947 Oct. 1902	*COOPE, SAMUEL	65, Bolton Road, Farnworth, Lancashire.
948 Oct. 1902	*COOPER, ARTHUR JOHN	21, Creighton Road, South Ealing, W.
172 May 1884	COOPER, ARTHUR LESLIE	17, Friar Street, Reading.
664 A. Oct. 1900 F. Nov. 1907	*COOPER, GEORGE AUGUSTUS ..	24, Stone Street, Maidstone.
813 A. Oct. 1901 F. July 1905	*COOPER, HARRY THOMAS	59, George Street, Portman Square, W.
594 Oct. 1909	COOPER, JAMES ALEXANDER ..	Lissadell Estate Office, Co. Sligo.
715 Jan. 1882	COOPER, JOHN GROVES	Bideford, Devon.
927 Jan. 1891	COOPER, JOHN ROBERT	35, Old Jewry, E.C., and Queen's Lodge, West End Lane, West Hampstead, N.W.
844 Feb. 1906	COOPER, STANLEY	17, Friar Street, Reading.
772 Sep. 1895	COOTE, STANLEY VICTOR, M.A. (Oxon).	Burley Manor, Ringwood, Hampshire.
966 A. Jan. 1891 F. Jan. 1895	*COPE, HENRY JAMES	Adelphi Chambers, 7, John Street, Strand, W.C.
597 Mar. 1889	CORBETT, EDWIN WORTLEY MONTAGU	Bute Estate Office, Castle St., Cardiff.
3666 A. Oct. 1900 F. Sep. 1905	*CORBETT, JOHN ROOKE, M.A. (Cantab.)	2, Spring Bank, Marple, Cheshire.
202 Nov. 1891	CORBY, JOSEPH BOOTHROYD ..	15, All Saints' Place, Stamford, Lincolnshire.
2453 A. Nov. 1891 F. May 1892	*CORDEROY, ATHELSTANE	Endgate, Tiverton, Devon.
581 Feb. 1889	CORDEROY, GEORGE	21, Queen Anne's Gate, S.W.
1330 Oct. 1898	*COTTERELL, ALBERT PLAYER ISAAC, M.I.C.E.	Scottish Buildings, 28, Baldwin Street Bristol.
926 A. Apr. 1883 F. Nov. 1889	COUCHMAN, HENRY BOTELER ..	Moor Park Estate Office, Rickmansworth, Herts.
934 Apr. 1883	COUCHMAN, ROBERT EDWARD ..	35, Paradise Street, Birmingham.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
556	Jan. 1880	COVERDALE, FREDERICK JOHN ..	Ingatestone Hall, Essex.
728	Feb. 1882	COVERDALE, HENRY	The Duke of Norfolk's Estates Office, Sheffield, Yorkshire.
1840	Nov. 1890	COWGILL, BRIAN BOLLANS HIRD	13A, Piece Hall Yard, Bradford.
3214	A. Oct. 1897 F. Nov. 1900	*COWPER, WILLIAM SHAPLAND ..	81, High Street, Sittingbourne, Kent.
5844	Oct. 1910	*COX, ARTHUR LAURENCE	45, Darley Street, Bradford.
1732	Feb. 1890	COX, EDWARD SAMUEL	3, New Street, York.
3087	A. Oct. 1896 F. May 1900	*COX, WALTER THEODORE ..	Holmbury, Bower Mount Road, Maidstone.
3977	A. Oct. 1902 F. Jan. 1910	*CRABTREE, PERCY	District Valuer's Office, York Building, Commercial Street, Halifax.
3525	A. Oct. 1899 F. Oct. 1907	*CRAGG, GEORGE EDWIN	Cayley Estate Office, Colwyn Bay, Denbighshire.
3526	A. Oct. 1899 F. Sep. 1903	*CRAMPTON, ARTHUR WESLEY ..	Leyton Avenue, Mansfield, Nottinghamshire.
2204	Nov. 1891	CRANFIELD, WILLIAM BATHGATE	6, Poultry, E.C.
961	A. May 1883 F. Nov. 1888	CRAWTER, JOHN	Cheshunt, Herts.
3215	A. Oct. 1897 F. May 1899	*CRESWELL, WILLIAM THOMAS, LIC.R.I.B.A.	11, Victoria St., S.W., and Epsom, Surrey.
2455	A. Nov. 1891 F. Jan. 1896	*CRIER, JOHN THOMAS	District Valuer's Office, St. Albans, Hertfordshire.
5424	A. Oct. 1908 F. Oct. 1909	*CRISP, GEORGE FREDERICK ..	County Buildings, Westgate Street, Gloucester.
608	A. Feb. 1881 F. Feb. 1890	CROFTS, EWAN NEVILLE	Caythorpe, Grantham, Lincolnshire.
3310	A. Feb. 1898 F. July 1902	*CRONK, CHARLES TYLEE	Sevenoaks, Kent.
730	Feb. 1882	CRONK, EDWYN EVANS	12, Pall Mall, S.W., and Sevenoaks, Kent.
731	Feb. 1882	CRONK, FRANK	12, Pall Mall, S.W., and Sevenoaks, Kent.
871	Jan. 1883	CRONK, WILLIAM HENRY	Sevenoaks, Kent.
5139	A. Oct. 1907 F. May 1910	*CROPPER, RICHARD BLAYLOCK	12, St. John's Lane, Liverpool.
2776	Sep. 1895	CROSBIE, JAMES DAYROLLES ..	Gurtenard, Listowel, Co. Kerry.
2138	A. May 1891 F. May 1898	*CROSS, ARNOLD CHARLES MARTIN	28, Victoria Street, S.W.
4124	Oct. 1903	*CROSS, ARTHUR GEORGE	Caxton House, Tothill Street, Westminster, S.W.
754	Mar. 1890	CROSS, WILLIAM HASLAM	77, King Street, Manchester.
5141	A. Oct. 1907 F. Oct. 1909	*CROZIER, HARRY WILLIAM ..	Bengeo, Hertford.
2208	Nov. 1891	CRUWYS, ROBERT	51, Upper Tulse Hill, S.W.
3768	A. Feb. 1901 F. May 1909	*CULLEN, FELIX VICTOR	6, Mortimer Street, W.
3368	A. Oct. 1898 F. Dec. 1899	*CULVERHOUSE, CECIL GOLDAR FEARN	25, Gloucester Place, Brighton.
1928	Jan. 1891	CUMBERLAND, EDWARD ANTHONY	Luton and Leighton Buzzard, Bedfordshire.

ip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
55	A. Oct. 1903 F. Nov. 1903	*CUNDY, HENRY I.	Nottingham Estate Office, Prince Regent's Lane, Custom House, E.
58	Feb. 1899	CUNNINGHAM, ROBERT	Branxholme, Hawick, Roxburghshire, N.B.
56	Jan. 1889	CURREY, PERCIVALL, F.R.I.B.A. (Honorary Secretary)	37, Norfolk Street, W.C.
381	Mar. 1887	CURRY, HENRY JOHN	58, High St., Stockton-on-Tees, Durham
581	Dec. 1880	CURTIS, CHARLES EDWARD	Woodlands, Brockenhurst, Hants.
483	Apr. 1877	CURTIS, ROBERT LEABON	11 and 12, Finsbury Square, E.C.
529	A. Oct. 1899 F. Nov. 1903	*CUTLER, GEORGE ALFRED	8, Bruton Street, Berkeley Square, W.
209	Nov. 1891	CUXSON, GEORGE AUSTIN PRYCE, A.R.I.B.A.	5, Duke Street, Adelphi, W.C., and Mead House, Chislehurst Common, Kent
3217	A. Oct. 1897 F. July 1905	*DADD, CHARLES JOHN THOMAS . .	Architects' Department, L.C.C., Spring Gardens, S.W.
4399	A. Oct. 1904 F. June 1909	*DADSON, REGINALD THORNTON	2, John Street, Bedford Row, W.C.
3930	A. Feb. 1902 F. Feb. 1903	*DALGLIESH, CHRISTOPHER	57, Albion Place, Reading.
3218	A. Oct. 1897 F. Feb. 1901	*DANGERFIELD, THOMAS SAMUEL	19 and 20, Holborn Viaduct, E.C.
3816	A. Oct. 1901 F. Jan. 1909	*§DANIELL, FREDERICK STANLEY . .	Head Gate, Colchester.
732	Feb. 1882	DANN, HENRY	Dartford, Kent.
3531	A. Oct. 1899 F. Nov. 1903	*DANN, HENRY, JUN.	3, Spital Street, Dartford, Kent.
1666	A. Dec. 1889 F. Apr. 1891	*DARCH, JOHN	55, West Side, Wandsworth Common, S.W.
2778	Sep. 1895	DARLEY, EDMUND SANDERS	5, College Green, Dublin.
907	A. Feb. 1883 F. May 1891	DASH, ROLAND ASHFORD	Valuer's Department, Somerset House W.C., and Oxshott, Surrey.
3669	A. Oct. 1900 F. July 1901	*DAUBNEY, CHARLES ARCHIBALD, A.R.I.B.A.	84, Lower Road, Rotherhithe, S.E.
848	A. Dec. 1882 F. Nov. 1890	DAVID, EDMUND USSHER	4, Park Place, Cardiff, Glamorgan shire.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
3670	A. Oct. 1900 F. July 1905	*DAVIDGE, WILLIAM ROBERT, A.M.I.C.E., A.R.I.B.A.	District Surveyor, Bank House, 95, High Street, Lewisham, S.E.
3460	Feb. 1899	DAVIDSON, CHARLES	Terrace Buildings, Paisley, Renfrewshire.
3176	Oct. 1897	DAVIDSON, JAMES INGLIS	Saughton Mains, Corstorphine, Midlothian.
2575	A. Oct. 1893 F. Mar. 1896	*\$DAVIES, CYRIL FROODVALE	Hafdre, Llanwrtyd Wells, Brecknockshire.
2512	A. Nov. 1892 F. Oct. 1894	*DAVIES, DAVID THOMAS	Valuer's Department, 13, St. Andrew's Crescent, Cardiff.
5378	Oct. 1908	*DAVIES, HORACE FRANCIS, A.R.I.B.A.	Laburnam Cottage, Dee Banks, Chester.
300	Feb. 1873	DAVIES, JOHN MORGAN	Froodvale, Llanwrda, South Wales.
1402	A. Oct. 1904 F. Nov. 1908	*DAVIES, JOHN NICHOLLS	Carim, Estella Avenue, West Barnes Lane, New Malden, Surrey.
2212	Nov. 1891	DAVIS, ALFRED THOMAS, A.M.I.C.E.	Shirehall, Shrewsbury.
1996	Mar. 1891	DAVIS, CHARLES EDWARD, B.A. (London)	Wroxton Estate Office, near Banbury, Oxon.
780	A. Mar. 1882 F. Nov. 1889	DAVIS, CHARLES JAMES	32, Strand, W.C.
897	Feb. 1883	DAW, WILLIAM HERBERT	12, Old Jewry Chambers, Old Jewry, E.C.
5095	Oct. 1907	*DAWSON, CHARLES FORD	Public Offices, Barking.
3370	A. Oct. 1895 F. Oct. 1900	*DAWSON, GEORGE CROSBIE	19, Priory Row, Coventry, Warwickshire.
1642	Dec. 1889	DAY, GEORGE CARLETON	Estate Office, Woodbridge, Shaftesbury, Dorset.
1009	A. Dec. 1883 F. Nov. 1887	*DAY, WILLIAM	High Street, Maidstone, Kent.
3818	A. Oct. 1901 F. Apr. 1911	*DEACON, STANLEY MARCUS	The Croft, Brownlow Road, Croydon.
693	Jan. 1882	DEACON, THOMAS MARK	32, Craven Street, Charing Cross, S.W.
2779	Sep. 1895	DEANE, GEORGE B.	6, Lansdown Road, Dublin.
2513	A. Nov. 1892 F. Aug. 1893	*DEBENHAM, FRANK BRIDGEWATER	80, Cheapside, E.C.
1442	Jan. 1888	DEBENHAM, FRANK GISSING	Cheshunt Park, Herts, and 80, Cheapside, E.C.
2576	A. Oct. 1893 F. Jan. 1899	*DEBENHAM, FREDERIC KERSEY	10, Holles Street, Cavendish Square, W.
2140	A. May 1891 F. Aug. 1893	*DEBENHAM, HORACE BENTLEY	80, Cheapside, E.C.
2216	Nov. 1891	DEER, EDWARD	Stratford-on-Avon, Warwickshire.
3533	A. Oct. 1899 F. Mar. 1903	*DELVES, ROBERT HARVEY ADDINGTON	City of Bombay Improvement Trust, Bombay.
1010	A. Dec. 1883 F. Oct. 1891	DEMETRIADI, THOMAS MARSDEN	28, John William Street, Huddersfield.
1667	A. Dec. 1889 F. Jan. 1894	*\$DENDY, WILLIAM COOPER	Borough Engineer's Department, Lambeth Town Hall, Brixton Hill, S.W.
1930	Jan. 1891	DENNISON, JOHN W., F.R.I.B.A.	28, Upperton Gardens, Eastbourne, Sussex.
1780	Sep. 1895	DENNY, FRANCIS MCGILLYCUDDY	17, Denny Street, Tralee, Co. Kerry.
1220	A. Oct. 1897 F. May 1903	*DENTON, WILLIAM	Montgomery Chambers, Hartshead, Sheffield.

lp. No.	Date of Election and of Transfer.	FELLOWS.	Address.
81	Sep. 1895	DICKINSON, CHARLES, B.A. (<i>Dublin</i>)	23, South Frederick Street, Dublin.
18	A. Dec. 1884 F. May 1885	*DICKSON, THOMAS ARTHUR ..	Estate Office, Overstone Park, Northampton.
63	A. Oct. 1894 F. May 1897	*DINWIDDY, DONALD	54, Parliament Street, S.W., and Greenwich, S.E.
81	A. Oct. 1902 F. Nov. 1908	*DINWIDDY, CONRAD HUGH ..	54, Parliament Street, S.W.
84	Feb. 1888	DINWIDDY, THOMAS, F.R.I.B.A.	54, Parliament Street, S.W., and Greenwich, S.E.
69	A. Feb. 1869 F. Feb. 1878	DODGSON, WILFRED LONGLEY ..	5, Mill Street, Ludlow, Shropshire.
26	Oct. 1904	DOHERTY, RICHARD WHEELER	Oaklands, Bandon, Co. Cork.
36	Apr. 1884	DOLL, CHARLES FITZROY, F.R.I.B.A.	5, Southampton St., Bloomsbury, W.C.
107	Oct. 1909	*DOLL, OTTO SIGISMUND	157, North Street, Brighton, Sussex.
17	Nov. 1891	DOLLAR, PETER, A.R.I.B.A. . .	Clock House, Arundel St., Strand, W.C.
15	A. Dec. 1887 F. Dec. 1891	*\$DONE, JOHN JAMES	Cricklewood, N.W.
150	Feb. 1885	DONNE, HENRY	The Abbey Ruins, Bury St. Edmunds, Suffolk.
118	Nov. 1891	DORNING, ARTHUR HARRY ..	Holmleigh, Bowdon, Cheshire.
132	Feb. 1908	DOUGLAS, ARTHUR HUGH ..	Eden House, Malton, Yorkshire.
193	Jan. 1878	DOWNING, FREDERICK	12, King's Bench Walk, Temple, E.C.
197	Mar. 1891	DOWNING, HENRY PHILIP BURKE F.R.I.B.A.	12, Little College Street, Westminster Abbey, S.W., and Avalon, Wilton Road, Merton, S.W.
317	A. May 1882 F. May 1884	DRAPER, ARTHUR THOMAS	Friar Lane, Leicester.
348	Jan. 1887	DRAY, ALFRED	30, Havelock Road, Hastings, Sussex.
301	Feb. 1873	DREW, HENRY	15, Queen Street, Exeter.
336	A. Dec. 1886 F. Nov. 1888	*DREW, HENRY ALBAN	15, Queen Street, Exeter.
095	A. Feb. 1884 F. Jan. 1889	DREW, JOHN GOULD, B.A. (<i>Oxon</i>)	15, Queen Street, Exeter.
220	Nov. 1891	DREWEATT, THOMAS	Newbury, Berkshire.
984	A. Oct. 1902 F. Nov. 1903	*DRIVER, ARTHUR CHARLES ..	23, Pall Mall, S.W.
985	A. Oct. 1902 F. Jan. 1910	*DROWER, EDMUND GILBERT ..	28, Victoria Street, S.W.
845	Feb. 1906	DROWER, JOHN EDMUND	28, Victoria Street, S.W.
845	Oct. 1910	*DRUMMOND, BERTRAM	54, Alfred Terrace, Fleetwood, Lancs.
684	Jan. 1882	DRURY, EDWARD DRU, F.R.I.B.A.	25, Queen Anne's Gate, S.W.
986	A. Oct. 1902 F. Jan. 1906	*DUCHESNE, MARTIN COLLIER ..	Farnham Common, Slough, Bucks.
692	A. Jan. 1890 F. Dec. 1893	*DUDLEY, EDGAR	Local Government Board, Whitehall, S.W.
802	May 1890	DUKE, EDWARD	Dorchester.
064	May 1891	DUKE, HENRY	Dorchester.
779	Apr. 1890	DUNCALFE, HENRY GEORGE ..	81, Darlington Street, Wolverhampton, Staffordshire.
221	Nov. 1891	DUNCAN, JAMES MORISON ..	40 and 42, Queen Victoria Street, E.C.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
3536	A. Oct. 1899 F. Oct. 1900	*DUNLOP, DUGDALE OAKELEY ..	57, King Street, Manchester.
1931	Jan. 1891	DUNN, SIR WILLIAM HENRY ..	11, St. Helen's Place, E.C.
4943	A. Oct. 1906 F. Jan. 1909	*†DUNSMORE, GILBERT	1, Garthorne Road, Honor Oak Park S.E.
3674	A. Oct. 1900 F. Nov. 1901	*DUNSTALL, HERBERT HENRY, A.R.I.B.A.	Bank Chambers, Railway Street Chatham, Kent.
4669	A. Oct. 1905 F. Oct. 1907	*DURBRIDGE, ERNEST	Duke Street, Manchester Square, W.
3148	Feb. 1897	DURLACHER, ALEXANDER PERCY, M.I.C.E.	33, New Bridge Street, Blackfriars, E.
1932	Jan. 1891	DUVALL, JOHN WILLIAM	The Grange, Ware, Herts.
2222	Nov. 1891	DYBALL, HARVEY	35, Bucklersbury, E.C.
792	Apr. 1882	DYER, WILLIAM JOHN	Montpelier Row, Blackheath, S.E.
3371	A. Oct. 1898 F. June 1904	*DYER, FREDERICK BURFIELD ..	Harlaxton, Bigwood Avenue, Hove Sussex.
1251	Feb. 1885	EADE, ARTHUR W. F., M.A. (<i>Cantab.</i>)	Branson House, Darlington, Durham
3675	A. Oct. 1900 F. Jan. 1908	*EARLE, JOHN WILFRID	Park Cottage, High Legh, Knutsford Cheshire, and 88, King Street Manchester.
1223	Nov. 1891	EARLE, THOMAS ALGERNON ..	90, King Street, Manchester.
2577	A. Oct. 1893 F. Feb. 1897	*EASON, EDWARD WILLIAM ..	192, Bishopsgate, E.C.
3090	A. Oct. 1896 F. June 1900	*EASTER, WILLIAM	Wiggenhall St. German, King's Lynn Norfolk.
1999	Mar. 1891	EAYRS, JOHN THOMAS, M.I.C.E. .	Clarence Chambers, Corporation Street Birmingham.

p. o.	Date of Election and of Transfer.	FELLOWS.	Address.
33	Feb. 1908	EDGAR, JAMES	Poltalloch Estate Office, Lochgilhead N.B.
79	Oct. 1908	*EDGE, FREDERIC JAMES, M.I.C.E.	38, Blackett Street, Newcastle-on- Tyne.
34	Sep. 1895	EDGEWORTH, THOS. NEWCOMEN	Kilshrewly, Edgeworthstown, Co. Longford.
79	A. Oct. 1893 F. Jan. 1896	*EDMONDS, JOHN	Drayton Estate Office, Islip, Thrapston, Northamptonshire.
46	Oct. 1910	*EDMONDS, JOHN NITCHELL ..	Wood Farm, Malvern Wells, Worcester- shire.
39	Dec. 1881	EGERTON, HUBERT DECIMUS ..	29, Fleet Street, E.C.
88	Dec. 1883	EGGAR, JAMES ALFRED	74, Castle Street, Farnham, Surrey.
49	A. Oct. 1895 F. Nov. 1896	*EGGINTON, DENYS	150, Friar Street, Reading.
30	A. Jan. 1879 F. Dec. 1883	EILOART, FREDERICK EDWARD ..	40, Chancery Lane, W.C.
27	Nov. 1891	ELFORD, JOHN	King Street, Poole, Dorset.
34	Jan. 1888	ELGAR, J. EDWARD	Crockshard, Wingham, Kent.
86	A. Nov. 1890 F. Feb. 1892	ELGOOD, FRANK MINSHULL, F.R.I.B.A.	98, Wimpole Street, W.
01	Dec. 1887	ELLEN, FREDERICK CHARLES ..	The Auction Mart, Andover, Hants.
36	Jan. 1884	ELLIOTT, CHARLES	20, Ermington Terrace, Plymouth, Devon.
14	A. Nov. 1892 F. Mar. 1896	*ELLIS, ALBERT EDWARD	Bedford Chambers, Exeter.
23	A. Oct. 1897 F. Nov. 1901	*ELLIS, ALFRED CAVE	57, Chancery Lane, W.C.
73	A. Oct. 1893 F. Jan. 1902	*ELLIS, ARNOLD ROBERTSON ..	47, High Street, Bedford.
78	Sep. 1895	ELLIS, ERNEST FRANCIS LESLIE	St. Austin's, Inch, Co. Wexford.
38	A. Nov. 1890 F. May 1894	*ELLIS, FRANCIS	Earl of Derby's Estate Office, Bury, Lancashire.
65	May 1891	ELLIS, FREDERICK	218, Willesden Lane, N.W.
50	A. Dec. 1888 F. May 1890	*ELLIS, HERBERT MOATES	9, Walbrook, E.C.
35	A. Jan. 1887 F. Feb. 1891	*ELLIS, RALPH STAPLES	29, Fleet Street, E.C.
85	Feb. 1883	ELLIS, RICHARD ADAM	45, Fenchurch Street, E.C.
91	A. Oct. 1896 F. June 1904	*ELPHICK, GEORGE PELHAM ..	Inland Revenue, 6, King's Buildings, Chester.
60	Oct. 1896	ELTON, HERBERT AVERILL, MAJOR	Eastern Command, Horse Guards, S.W.
67	A. Dec. 1881 F. Dec. 1890	ELWELL, WILLIAM HENRY	The Cottage, Dovercourt, Essex.
30	Feb. 1898	EMERY, ARTHUR JAMES, MAJOR	Horse Guards, Whitehall, S.W.
23	Nov. 1891	EVANS, ARTHUR OWEN	Glasfryn, Pontypridd, Glamorganshire.
50	A. Oct. 1895 F. Nov. 1909	*EVANS, ERNEST SYDNEY	Inland Revenue, 6A, Hammet Street, Taunton.
68	Oct. 1909	*EVANS, SAMUEL	County Offices, Mold, Flintshire.

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2231	Nov. 1891	EVANS, WALTER PEARSON ..	19, Priory Row, Coventry.
2232	Nov. 1891	EVANS, WILLIAM, A.M.I.C.E. ..	New Walk, Beverley, Yorkshire.
338	A. Feb. 1874 F. Nov. 1876	EVANS, WILLIAM ERNEST ..	School Gardens, Shrewsbury.
2664	A. Oct. 1894 F. Feb. 1901	*EVE, CHARLES GERALD ..	Inland Revenue, Westminster Building Nottingham.
1416	A. Dec. 1887 F. May 1891	*EVE, HERBERT TRUSTRAM ..	2, St. Paul's Square, Bedford, and 4 Parliament Street, S.W.
104	Aug. 1868	EVE, WILLIAM	10, Union Court, E.C.
3503	Oct. 1899	*EVE, WILLIAM HAROLD ..	10, Union Court, E.C.
1382	Mar. 1887	EVERARD, JOHN BREEDON, M.I.C.E., F.R.I.B.A.	6, Millstone Lane, Leicester.
2665	A. Oct. 1894 F. Nov. 1900	*EVERINGTON, JOHN	114, Queen Victoria Street, E.C., at Forster Estate Office, 33, Culver Road, Catford, S.E.
3826	A. Oct. 1901 F. May 1905	*EVERY-CLAYTON, REGINALD ARTHUR ERIC	Blackmore Park Estate Office, Hand Swan, near Worcester.
2666	A. Oct. 1894 F. Nov. 1895	*EVES, FRANCIS GEORGE BERTRAM	54, High Street, Uxbridge, Middlesex
1549	A. Jan. 1889 F. Nov. 1892	*EVES, WILLIAM LIONEL	54, High Street, Uxbridge, Middlesex
3777	Oct. 1901	*EWING, GUY BEAUMONT	Cole Allen, Edenbridge, Kent.
2667	A. Oct. 1894 F. Sep. 1904	*FAGG, EDWIN WILLIAM	15, Glebe Road, Barnes, S.W.
3092	A. Oct. 1896 F. Nov. 1901	*FAIR, ARTHUR EDWARD	Estate Office, Haigh Hall, Wigan, La cashire.
1510	Dec. 1888	FAIR, JAMES STRETTON	Estate Offices, Lytham, Lancashire.
5334	Feb. 1908	FAIRBAIRN, THOMAS	The Red House, Cluny Gardens, Edi burgh.
4163	A. Oct. 1903 F. June 1906	*FAIRCHILD, EDWARD JAMES ..	Wenlock House, Laurel Road, S Albans, Herts.
1937	Jan. 1891	FAIRCLOUGH, WILLIAM	Leigh, Lancashire, and 60, King Street Manchester.
1758	Mar. 1890	FALCON, MICHAEL	Horstead House, Norwich.
2951	A. Oct. 1895 F. Oct. 1899	*FARMER, HUGH CECIL	5, Great College Street, Westminster Abbey, S.W.

p. o.	Date of Election and of Transfer.	FELLOWS.	Address.
34	Nov. 1891	FARNAN, HENRY RICHARD ..	75, Finsbury Pavement, E.C.
25	A. Oct. 1897 F. July 1905	*FARNHAM, WILLIAM AUGUSTUS ..	The Council Offices, Foot's Cray U.D.C., Sidcup, Kent.
87	Sep. 1895	FARRELL, EDWARD FRANCIS, LT.- COLONEL	Walterstown, Moynalty, Kells, Co. Meath.
47	A. Oct. 1906 F. Nov. 1907	*FARRER, FREDERICK ROBERT ..	2, Coleman Street, E.C.
02	Mar. 1891	FARRER, JOHN (<i>Vice-President</i>)	Oulton, near Leeds, Yorkshire.
35	Nov. 1891	FARTHING, WALTER THOMAS ..	46, Strand, W.C.
37	Jan. 1884	FAYERMAN, GEORGE METCALFE ..	57, The Parade, Leamington, Warwick- shire.
25	Oct. 1895	*FENN, ANDREW THOMAS CRANAGE	Talbot Chambers, Shrewsbury.
34	Oct. 1904	*FENTON, ADAM DOUGLAS	Maristow Estate Office, Roborough, S. Devon.
309	Oct. 1909	*FERGUSSON, JOHN	30, George Square, Glasgow.
374	Nov. 1883	FERRIS, GEORGE	Milton Manor, Pewsey, Wilts.
331	Dec. 1882	FIDDIAN, WILLIAM	Old Bank Offices, Stourbridge, Wor- cestershire.
374	A. Oct. 1898 F. July 1907	*FIELD, CHARLES ROLAND ..	54, Borough High Street, S.E.
297	Jan. 1873	FIELD, FRANCIS HAYWARD ..	11, King Edward Street, Oxford.
926	Oct. 1895	*FIELDS-CLARKE, GEORGE THOMAS	Estate Office, Southill Park, Biggleswade Beds.
517	A. Nov. 1892 F. May 1896	*FINN, FRED	Queen Street, Deal, Kent.
456	A. Nov. 1891 F. Oct. 1894	*FINN, HERBERT ARCHIBALD ..	Hillside, St. Mark's Hill, Surbiton, Surrey.
448	A. Oct. 1908 F. Dec. 1910	*FIRTH, HARRISS	Valuation Department, Inland Revenue, Basinghall Street, Leeds.
927	A. Apr. 1883 F. Jan. 1889	FISHER, CHARLES BROWNING ..	Market Harborough, Leicestershire.
682	A. Oct. 1905 F. June 1906	*FISHER, THOMAS GEORGE	18, Bennett's Hill, Birmingham.
851	A. Oct. 1893 F. Mar. 1896	*FITT, HARRY CHARLES	21, Craven Avenue, Ealing, W.
007	Jan. 1896	FITZGERALD, JAS. H. B. PENROSE	The Estate Office, Middleton, Co. Cork.
789	Sep. 1895	FITZGERALD, PETER DAVID ..	Estate Office, Adare, Co. Limerick.
790	Sep. 1895	FITZGERALD, ROBERT JOHN ..	Ballyard House, Tralee, Co. Kerry.
504	Oct. 1899	*FLETCHER, BANISTER FLIGHT, F.R.I.B.A.	29, New Bridge Street, E.C.
582	A. Oct. 1893 F. June 1897	*FLETCHER, HERBERT PHILLIPS, F.R.I.B.A., A.M.I.C.E.	29, New Bridge St., Ludgate Circus, E.C.
465	Mar. 1888	FLETCHER, THOMAS	46, Fishergate, Preston, Lancashire.
166	A. Oct. 1903 F. Apr. 1911	*FLEURET, ALFRED HARMAN ..	125, High Holborn, W.C.
749	A. Feb. 1882 F. June 1891	FLINT, WILLIAM HURST	11, Searle St., Lincoln's Inn Fields, W.C.
734	Feb. 1890	FODEN, EDWARD ANTROBUS ..	Teddesley Estate Office, Penkridge, Staffs.
794	Sep. 1895	FORBES, ARTHUR	Earls Vale, Cavan, Ireland.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2067	May 1891	FORBES, CHARLES MANSFELDT..	14, New Street, York.
2238	Nov. 1891	FORD, LAWTON ROBERT	60, Haymarket, S.W.
2518	A. Nov. 1892 F. May 1895	*FORD, SOLOMON, A.R.I.B.A. ..	3, South Square, Gray's Inn, W.C.
551	Dec. 1879	FORSYTH, EDWARD	Hanley, Staffordshire, and Springfield Stramshall, Uttoxeter, Staffordshire
5096	Oct. 1907	*FORSYTH, WILLIAM	21, High Street, Hanley, Staffordshire
2519	A. Nov. 1892 F. Nov. 1895	*FOSTER, JAMES HERBERT FUR- MEDGE	4 & 5, Charles Street, St. James's Square, S.W.
3558	A. Oct. 1899 F. Dec. 1904	*FOWLER, ALFRED CHARLES STANLEY	74, Cheapside, E.C.
3187	Oct. 1897	FOWLER, ALFRED MOUNTAIN, M.I.C.E.	1, St. Peter's Square, Manchester.
686	Jan. 1882	FOWLER, FREDERICK	St. James' Street, Sheffield.
1806	May 1890	FOWLER, GERARD EDMUND ..	Colmore House, 21, Waterloo Street Birmingham.
832	Dec. 1882	FOWLER, HENRY	6, Waterloo Street, Birmingham.
1780	Apr. 1890	FOWLER, REGINALD WILLIAM ..	3, Hartshead, Sheffield.
1403	Dec. 1887	FOWLER, RICHARD	118, Colmore Row, Birmingham.
2240	Nov. 1891	FOWLER, WILLIAM	69, Temple Row, Birmingham.
2732	A. Mar. 1895 F. June 1911	*FOX, CHARLES EDWARD	7, Rawson Street, Halifax, Yorkshire
2241	Nov. 1891	FOX, CHARLES JAMES	7, Rawson Street, Halifax, Yorkshire.
1845	Nov. 1890	FOX, EDWIN	99, Gresham Street, E.C.
3680	A. Oct. 1900 F. Dec. 1902	*FOX, ERNEST	80, Poole Road, Bournemouth, Hampshire.
2669	A. Oct. 1894 F. Oct. 1899	*FOX, FREDERICK RUSSELL ..	Grove Hill, Barnstaple, Devon.
4422	A. Oct. 1904 F. Nov. 1909	*FOX, SIDNEY JOSEPH	131, Finsbury Pavement, E.C.
3681	A. Oct. 1900 F. Jan. 1904	*FOX, WILLIAM	80, Poole Road, Bournemouth, Hampshire.
2422	Nov. 1891	FRAMPTON, ALFRED, A.R.I.B.A.	62 and 63, Basinghall Street, E.C.
2243	Nov. 1891	FRANCE, ARTHUR ALDERSON	99, Swan Arcade, Bradford, Yorkshire
1545	Jan. 1889	FRANCIS, GEORGE FUTVOYE ..	Eaton Chambers, Buckingham Palace Road, S.W.
3831	A. Oct. 1901 F. June 1906	*FRANCIS, JOHN	The Mount, Carmarthen.
1760	Mar. 1890	FRANCIS, LEON ALBERT	8, John Street, Adelphi, W.C.
1808	May 1890	FRANKLIN, ARTHUR THOMAS ..	25, Ludgate Hill, E.C.
2457	A. Nov. 1891 F. Feb. 1895	*FRANKLIN, BENJAMIN BELGROVE	21, Market Hill, Luton, Beds.
2792	Sep. 1895	FRANKS, MATTHEW HENRY ..	Westfield, Mountrath, Queen's County
2793	Sep. 1895	FRANKS, MATTHEW HENRY, JUN.	Westfield, Mountrath, Queen's County
5335	Feb. 1908	FRASER, GEORGE JOHN JAMES HAMILTON GORDON	Dalzell Estate Office, Motherwell, N.I.

p. o. n.	Date of Election and of Transfer.	FELLOWS.	Address.
9	A. Jan. 1896 F. June 1897	*FRASER, THOMAS SMELLIE ..	209, St. Vincent Street, Glasgow.
37	A. Jan. 1891 F. Dec. 1894	*FRASER, WILLIAM	209, St. Vincent Street, Glasgow.
14	A. Feb. 1884 F. Apr. 1890	FREEMAN, SYDNEY	Tunbridge Wells, Kent, and 28, Queen Street, Cheapside, E.C.
31	A. Oct. 1902 F. Apr. 1911	*FRENCH, CECIL GEORGE..	Newington, Chandos Road, East Finchley, N.
95	Sep. 1895	FREND, HENRY	Derry House, Brosna, S.O., King's County
47	Oct. 1910	*FREW, GORDON THOMSON..	216, West George Street, Glasgow.
80	Oct. 1908	*FREYBERG, HERBERT ..	24, Cromwell Place, S.W.
27	Feb. 1902	FRITCHLEY, EDWIN WOLLASTON	6, Sirdar's Palace, Hummum Street, Fort Bombay.
69	May 1891	FROST, FREDERIC CORNISH ..	Teignmouth, Devon.
31	Oct. 1898	*FRY, JOSEPH HARRY	64, Craven Park, Willesden, N.W.
34	Feb. 1882	FRYER, GEORGE	5, Caroline Place, Hull.
24	A. Mar. 1884 F. Apr. 1891	FULLER, THOMAS ALFRED..	The College, All Saints', Derby.
48	Oct. 1910	*FULTON, EDWIN ALEXANDER ..	Estate Office, Sedgwick, near Kendal.
53	A. Oct. 1895 F. Sep. 1905	*FUNNELL, HORACE FREDERICK..	16, Martindale, East Sheen, S.W.
226	A. Oct. 1897 F. Jan. 1901	*FURMEDGE, JOHN HARRIS ..	Estate Office, Lucknam, Chippenham, Wilts.
161	Feb. 1899	FYFE, JOHN WILLIAM	Inland Revenue, 53, Hanover Street, Edinburgh.
17	Jan. 1876	GAIRDNER, EDWARD JAMES ..	Effingham House, Arundel Street, Strand, W.C.
61	Oct. 1896	GALBRAITH, SAMUEL HAUGHTON, MAJOR, M.A., B.E. (<i>Dub'in</i>) ..	Royal Engineer Office, Devonport.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2245	Nov. 1891	GALE, ARTHUR JOHN, F.R.I.B.A.	4, Serjeants' Inn, Fleet Street, E.C.
2004	Mar. 1891	GALE, ERNEST SEWELL	33, New Bridge Street, E.C.
3683	A. Oct. 1900 F. Nov. 1901	*GALE, HARRY	High Street, Egham, Surrey.
761	Feb. 1882	GALE, JOSEPH JOHN	Market Place, Wallingford, Berks.
55	July 1868	GALSWORTHY, FREDERICK THOMAS	11, Waterloo Place, S.W.
1713	Feb. 1890	GAMBLE, SIDNEY GOMPERTZ, A.M.I.C.E.	Metropolitan Fire Brigade, Southwa. Bridge Road, S.E.
1606	Mar. 1889	GANDY, JAMES	22, Essex Street, Strand, W.C.
3377	A. Oct. 1898 F. Nov. 1899	*GARDINER, ROBERT STRACHAN..	Hawarden Estate Office, Hawarden, no Chester, Flintshire.
2520	A. Nov. 1892 F. Mar. 1895	*GARDNER, GILBERT	Crawley, Sussex.
1889	A. Nov. 1890 F. Oct. 1907	*GARRARD, ARTHUR NORMAN ..	8, Frederick's Place, Old Jewry, E.C.
2246	Nov. 1891	GARRARD, NORTON BURROUGHS	Hoxne, Eye, Suffolk.
2247	Nov. 1891	GARROOD, THOMAS WILLIAM M.	Birkbeck Bank Chambers, High Holbor W.C.
5595	Oct. 1909	GARVEY, GEORGE BLOOMFIELD..	Carrigduve, Greystones, Co. Wicklow.
2800	Sep. 1895	GARVEY, TOLER ROBERT, JUN...	Estates Office, Parsonstown, King's Co.
1810	May 1890	GATE, ALFRED JOSEPH	35A, Mecklenburgh Square, W.C.
3540	A. Oct. 1899 F. July 1901	*GATE, HENRY ARTHUR ARMYTAGE	35A, Mecklenburgh Square, W.C.
688	Jan. 1882	GATER, CALEB WILLIAM	Salisbury.
1203	A. May 1884 F. Jan. 1889	GAYFORD, HENRY JOHN	Raynham Estate Office, East Raynham Norfolk.
2248	Nov. 1891	GELDER, SIR WILLIAM ALFRED, M.P., F.R.I.B.A.	76, Lowgate, Hull.
3541	A. Oct. 1899 F. May 1905	*GENGE, WILLIAM POPE, JUN. ..	Inland Revenue, 6A, Hammet Street Taunton.
2521	A. Nov. 1892 F. Nov. 1895	*GERMAN, GEORGE	Rawdon Terrace, Ashby-de-la-Zouch.
2070	May 1891	GERMAN, HARRY	The Gables, Ashby-de-la-Zouch, and Loughborough.
887	Feb. 1883	GERMAN, JOHN (<i>Member of Council</i>)	Ashby-de-la-Zouch, Leicestershire.
3684	A. Oct. 1900 F. Jan. 1902	*GIBBON, EDWARD ACTON	Elmhurst, Waterford.
1294	A. Jan. 1886 F. Nov. 1890	*GIBBON, WM. JACOMB, A.R.I.B.A.	The Oaks, Burgess Hill, Sussex.
1663	A. Dec. 1889 F. May 1893	*GIDDY, OSMAN HORTON	11A, Regent Street, Waterloo Place, S.
4464	A. Oct. 1904 F. Jan. 1909	*GILBERT-LODGE, EDWARD MOR- TON	11, Queen Victoria Street, E.C.
381	Feb. 1875	GILBERT, WILLIAM HENRY SAIN- BURY	70, Queen Street, Cheapside, E.C.
3462	Feb. 1899	GILCHRIST, JOHN	81, Hope Street, Glasgow.
1621	Apr. 1889	GILLART, DAVID	Penrallt, Machynlleth, Montgomery.

p. o.	Date of Election and of Transfer.	FELLOWS.	Address.
33	Feb. 1899	GILLESPIE, JOHN	Blackhall, Paisley, Renfrewshire
36	Mar. 1888	GILPIN-BROWN, WILLIAM DUNDAS	Estate Office, Stoneleigh Abbey, Kenilworth, Warwickshire.
75	Feb. 1907	GILRUTH, WILLIAM	H.M. Office of Works, Victoria Street, Liverpool.
34	A. Oct. 1901 F. May 1909	*GIMSON, ALLEN	Cleveland, Love Lane, Pinner, Middlesex.
26	A. Oct. 1904 F. Jan. 1908	*GLASIER, EDWARD BROUGHAM ..	7, St. James's Street, S.W.
72	A. Oct. 1903 F. Dec. 1909	*GLEED, PERCIVAL FRANCIS ..	8 and 9, Martin's Lane, Cannon St., E.C.
32	Jan. 1890	GLEED, RICHARD CUMMINGS ..	8 and 9, Martin's Lane, Cannon St., E.C.
68	Oct. 1908	GLEN, JAMES	Ashfield, Park Place, Stirling.
01	Sep. 1895	GLOSTER, THOMAS EDWARD ..	Collon, Co. Louth.
72	A. Oct. 1894 F. June 1895	*GLOVER, HENRY ALEXANDER ..	21, Dahomey Street, Streatham, S.W.
02	Oct. 1905	GOADBY, FRANCIS HUBERT, A.M.I.C.E.	Works Department, H.M. Dockyard, Chatham, Kent.
95	A. Oct. 1896 F. Oct. 1900	*GOADBY, HOWARD	72, Clifden Rd., Twickenham, Middlesex.
74	A. Oct. 1903 F. Apr. 1911	*GODDING, FRANK HORATIO ..	Valuation Department, Inland Revenue, South Parade, Northallerton, Yorkshire.
28	A. Oct. 1897 F. Feb. 1900	*GOLDSMITH, DOUGLAS FLEET ..	Lavant Street, Petersfield, Hants.
85	A. Oct. 1900 F. Nov. 1905	*GOODBODY, FREDK. ALLEN STURGE	33, Corn Street, Bristol.
89	Dec. 1883	GOODCHILD, JOSIAH	Bank Chambers, Parkhurst Road, N.
94	A. Oct. 1902 F. Oct. 1909	*GOODCHILD, RALPH HARRY ..	Bank House, East Dereham, Norfolk.
36	A. Oct. 1901 F. Nov. 1909	*GOODCHILD, WALTER CHARLES ..	29, Crookston Road, Eltham, Kent, and 63, Finsbury Pavement, E.C.
83	Oct. 1906	GOODING, WILLIAM ALFRED ..	Arndilly, York Road, St. Albans, Hertfordshire.
43	A. Oct. 1899 F. Dec. 1904	*GOODMAN, ALFRED	35, Bucklersbury, E.C.
46	Jan. 1889	GOODWYN, LEONARD WILLIAM ..	8, Granville Chambers, Granville Place, Portman Square, W.
28	Feb. 1902	*GORDON, ALEXANDER	97, Queen Victoria Street, E.C.
69	Oct. 1908	GORDON, ALEXANDER WILLIAM ROBERT	Queensgate, Inverness.
52	Nov. 1891	GOTT, CHARLES HENRY, M.I.C.E.	1, Parkfield Road, Manningham, Bradford, Yorkshire.
67	Jan. 1889	GOTT, FRANK	3, East Parade, Leeds.
53	A. Feb. 1897 F. May 1897	*GOULDING, ARTHUR	41, Moorgate Street, E.C.
72	May 1891	GOVER, ARTHUR SUTTON, F.R.I.B.A.	4, Queen Street Place, E.C.
18	Dec. 1884	GRAIN, ARTHUR TRESS	66, St. Andrew's Street, Cambridge.
27	A. Dec. 1882 F. Jan. 1885	GRANT, JAMES	Glandwr, Llanidloes, Montgomeryshire.
29	A. Oct. 1897 F. Mar. 1909	*GRAY, HORACE NORMAN	334, Commercial Road, E.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
5675	A. Oct. 1909 F. Oct. 1910	*GRAY, JOHN	27, Hill Street, Alloa, N.B.
3096	A. Oct. 1896 F. July 1907	*GREEN, ARTHUR EDWARD ..	Inland Revenue, Weimar House, Chichester.
2141	A. May 1891 F. May 1897	*GREEN, EDMUND HORACE ..	17, St. Swithin's Lane, E.C.
2584	A. Oct. 1893 F. May 1897	*GREEN, FREDERICK ALGERNON ..	17, St. Swithin's Lane, E.C.
3149	Feb. 1897	GREENWOOD, JOSEPH, MAJOR ..	Headquarter Offices, Northern Command, York.
3150	Feb. 1897	GREGORY, ALFRED, MAJOR ..	War Office, Whitehall, S.W.
2955	A. Oct. 1895 F. June 1896	*GREGSON, GEORGE ERNEST ..	11, Chapel Street, Preston, Lancashire.
2257	Nov. 1891	GREGSON, WILLIAM	106, Victoria Road, Darlington, Co. Durham.
1087	Feb. 1884	GRELLIER, HARLEY MAIR ..	6, Queen Anne's Gate, S.W., and Epsom, Surrey.
371	Jan. 1875	GREY, CHARLES GREY, M.A. (Durham)	8, Lansdowne Terrace, Ballsbridge, Dublin.
2673	A. Oct. 1894 F. May 1896	*GRIFFIN, ALFRED	Moir Chambers, 17, Ironmonger Lane, E.C.
2073	May 1891	GRIFFIN, HAROLD	54, High Street, Battersea, S.W.
1736	Feb. 1890	GRIFFITHS, WILLIAM	Gelley-Wernan Estate, Llanelli, Carmarthenshire.
2258	Nov. 1891	GRIGGS, ROBERT, A.R.I.B.A. ..	11, Gray's Inn Square, W.C.
1612	Apr. 1889	GRIMLEY, THOMAS	40, Temple Street, Birmingham.
5459	A. Oct. 1908 F. Oct. 1910	*GRIMWOOD, ARTHUR	Inland Revenue, 4, Mosley Street, Newcastle-on-Tyne.
3379	A. Oct. 1898 F. Dec. 1901	*GRIPPER, JOSEPH EDWARD ..	47, High Street, Bedford.
2486	Feb. 1892	GROGAN, HENRY THOMAS	101, Park Street, Grosvenor Square, W.
1811	May 1890	GROSE, VINCENT J., F.R.I.B.A. ..	13, Railway Approach, S.E.
5169	A. Oct. 1907 F. Oct. 1910	*GROVE, ALBERT	1, Parkfield Terrace, Stourbridge, Worcestershire.
1727	A. Feb. 1890 F. Jan. 1893	*GROVER, ARTHUR	11, Cecil Court, Charing Cross Rd., W.
2674	A. Oct. 1894 F. Jan. 1899	*GROVER, PHILIP GORDON ..	Eastbrook Lodge, Lyminge S.O., Kent.
3995	A. Oct. 1902 F. Dec. 1909	*GROVES, ARNOLD TUDOR	125, High Holborn, W.C.
1737	Feb. 1890	GUDGEON, GEORGE EDWARD ..	Estate Agency Offices, Winchester.
4327	Oct. 1904	GUINNESS, GERALD SEYMOUR ..	16, College Green, Dublin.
4328	Oct. 1904	GUINNESS, HOWARD RUNDALL ..	16, College Green, Dublin.
1550	A. Jan. 1889 F. May 1900	*GUNTER, JAMES	Estate Office, Glasbury, Radnorshire.
347	Mar. 1874	HADDOCK, ROLAND	21, Verulam Road, Hitchin, Hertfordshire.
1670	A. Dec. 1889 F. Aug. 1893	*HADLEY, FRANK	18, Bennett's Hill, Birmingham.

No. Date of Election and of Transfer.	FELLOWS.	Address.
3 A. Nov. 1892 F. Oct. 1896	*HAIGH, THOMAS FREDERICK ..	c/o Miller and Haigh, 25, Halford Street, Leicester.
4 A. Oct. 1909 F. June 1910	*HALE, HARRY BARNES	Gresham Lodge, Sidcup, Kent.
3 Nov. 1891	HALE, RAYMOND HENRY	6, Queen Anne's Gate, S.W.
7 A. Oct. 1900 8 F. Feb. 1910	HALL, AUGUSTUS WILLIAM ..	General Valuation Office, 6, Ely Place, Dublin.
9 Oct. 1904	HALL, DAVID	18, South Mall, Cork.
9 May 1881	HALL, ERNEST	56, Commercial Road, Portsmouth.
3 A. Oct. 1905 F. Oct. 1910	*HALL, FRANCIS SAMUEL	8, Westmoreland Street, Dublin, and 457, Birkbeck Bank Chambers, W.C.
8 A. Oct. 1896 F. June 1897	*HALL, JOHN HERBERT	1, Cooper Street, Manchester, and 2, Dunham Road, Altrincham, Cheshire.
5 A. Jan. 1886 F. June 1891	*\$HALL, WILLIAM TIMOTHY	College Hill, Shrewsbury.
39 May 1884	HALLETT, WILLIAM BROWN ..	11, Queen Victoria Street, E.C., and 278, Holloway Road, N.
19 A. Apr. 1889 F. Dec. 1891	*HALL-JONES, FREDERICK	Parliament Mansions, Victoria Street, S.W., and 35, The Broadway, Ealing, W.
3 Sep. 1895	HAMILTON, ARTHUR	40, Lower Dominick Street, Dublin.
34 Sep. 1895	HAMILTON, EDWARD CHETWOOD, MAJOR	Woodstock Estate Offices, Inistioge, Co. Kilkenny.
37 Feb. 1908	HAMILTON, JOHN COCHRANE ..	53, Hanover Street, Edinburgh.
95 Feb. 1898	HAMILTON, ROBERT	Lands Valuation Office, Greenock, Ren- frewshire.
49 Oct. 1910	*HAMMOND, FREDERIC SNOWDEN	23, Barbican, E.C.
51 Feb. 1897	HAMMOND, ROBERT WILLIAM, MAJOR	Sun Lodge, Ballintemple, Cork.
43 A. May 1891 F. Jan. 1896	*HAMPTON, GEORGE FREDK. WM.	2 and 3, Cockspur Street, S.W.
92 A. Feb. 1883 F. Jan. 1889	*†HANSELL, REGINALD GODDARD ..	5, Lancaster Place, Strand, W.C.
13 A. Feb. 1903 F. Oct. 1910	*HANSON, HAROLD, A.M.I.C.E. ..	11, Cloth Hall Street, Huddersfield, Yorkshire.
66 Nov. 1891	HANSON, JOHN HENRY, A.M.I.C.E. (Member of Council)	11, Cloth Hall Street, Huddersfield, Yorkshire.
42 Dec. 1881	HARDCASTLE, FREDERICK HENRY APPLETON, A.R.I.B.A.	5, Old Queen Street, S.W.
05 Sep. 1895	HARDMAN, EDWARD CHAMBRÉ ..	14, Molesworth Street, Dublin.
32 Apr. 1888	HARDY, RICHARD THOMAS ASH ..	Land Agency and Estate Offices, Carter Street, Uttoxeter, Staffordshire.
10 Oct. 1905	*HARGRAVE, WILLIAM HARRISON, A.M.I.C.E. (Ireland)	68, Grosvenor Square, Rathmines, Co. Dublin
13 Apr. 1889	HARGRAVES, STEPHEN	Brabyns Estate Office, Manor House, Marple, Cheshire.
7 A. Oct. 1909 F. Oct. 1910	*HARKNESS, JOHN	54, St. Leonard's Road, Ayr.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
4182	A. Oct. 1903 F. Oct. 1910	*HARLAND, HENRY CHAPMAN ..	Bellevue Grove, Grove Hill, Middlebrough, Yorkshire.
2007	Mar. 1891	HARLE, JOHN JOSEPH	Tortworth Estate Office, Falfield, Gloucester.
614 4320	A. Feb. 1881 F. Oct. 1904	HARPER, EDGAR JOSIAH	Beech Hyrst, Haling Park Road, Croydon.
2267	Nov. 1891	HARPUR, WILLIAM, M.I.C.E. ..	Town Hall, Cardiff, Glamorganshire.
4846	Feb. 1906	HARRIS, ARNOLD ELSMERE ..	117, Colmore Row, Birmingham.
990	Dec. 1883	HARRIS, JAMES	Winchester.
3189	Oct. 1897	*HARRISON, CHARLES	179, Horninglow Street, Burton-upon-Trent, Staffordshire.
4125	Oct. 1903	*HARRISON, FREDERICK	District Valuer, Union Street Chambers, Coventry.
4603	Oct. 1905	HARRISON, FREDERICK WALTER	H.M. Admiralty, S.W.
2676	A. Oct. 1891 F. Apr. 1901	*HARRISON, GEORGE JOHN ROBERTSON	8, Lancaster Place, Strand, W.C.
1739	Feb. 1890	HARRISON, JAMES THOMAS ..	Town Hall Offices, Buckingham.
3232	A. Oct. 1897 F. Dec. 1899	*HARRISON, JOHN EDWARD ..	Estate Office, Allestree, near Derby.
1812	May 1890	HARSTON, ARTHUR	60, Cawley Road, Hackney, N.E.
3464	Feb. 1899	HART, JOHN	Cowie Mains, Stonehaven, Kincardineshire.
2730	Mar. 1895	HARTLEY, HENRY	Bristowe Chambers, 8, Harrington Street, Liverpool.
3626	A. Feb. 1900 F. May 1910	*HARTLEY, TOM PERCY	Well Manor, Long Sutton, Winchester, Hampshire.
2806	Sep. 1895	HARVEY, JAMES GEO. MOREWOOD	Northern Bank Buildings, London.
523	A. Dec. 1878 F. Jan. 1890	HARVEY, JOHN JAMES SAYER ..	80, Castle Street, Canterbury, Kent.
5338	Feb. 1908	HARVIE, ROBERT	8, Clyde Street, Motherwell, N.B.
1551	A. Jan. 1889 F. Oct. 1891	HASKINS, WILLIAM ALBION ..	2, Tanfield Court, Temple, E.C.
312	May 1873	HASLAM, DRYLAND	Friar Street Chambers, Reading.
1672	A. Dec. 1889 F. Aug. 1893	*HASLAM, DRYLAND, JUN. ..	Friar Street Chambers, Reading.
962	A. May 1883 F. Apr. 1889	*HASLUCK, LANCELOT GERALD ..	Green Hill Park, New Barnet, Hertfordshire.
5596	Oct. 1909	HATTE, WILLIAM MUNDAY ..	Nassau Street, Dublin, and Charleville Co. Cork.
2268	Nov. 1891	HAWKER, HARRY EDWIN	St. Peter's Chambers, Bournemouth, Hants.
1472	Mar. 1888	HAWKINS, CHARLES	Downham Market, Norfolk.
3691	A. Oct. 1900 F. July 1903	*HAWKINS, LANCELOT GOULDER ..	Downham Market, Norfolk.
2269	Nov. 1891	HAYNES, HENRY	Estate Office, Clifton, Nottingham.
1513	Dec. 1888	HAYTON, JOSEPH WILLIAM ..	9, Bank Street, Carlisle.
1968	A. Jan. 1891 F. Apr. 1894	*HAYWARD, FREDERICK GEORGE	Market Square, Dover, Kent.
644	Dec. 1881	HAYWARD, HENRY	Dover, Kent.
3233	A. Oct. 1897 F. June 1900	*HAYWARD, THOMAS WILLIAM ALFRED, A.M.I.C.E., M.I.M.E.	Municipal Buildings, Lavender Hill, S.W.

p. o.	Date of Election and of Transfer.	FELLOWS.	Address.
54	Feb. 1885	HAYWOOD, WILLIAM MATTHEWS	9, West Street, Hereford.
97	A. Oct. 1902 F. June 1909	*\$HAZLEDINE, JOHN TURNER CLOUGH	Gateway Chambers, Shrewsbury.
73	A. Dec. 1889 F. May 1891	*\$HEAD, JOHN GEORGE	7, Upper Baker Street, N.W.
83	A. Oct. 1898 F. Apr. 1901	*HEALING, OSWALD JUDD	21, Queen Anne's Gate, Westminster, S.W.
30	Oct. 1904	HEARD, RICHARD	15, South Mall, Cork.
70	Nov. 1891	HEATH, HENRY	34, Finsbury Pavement, E.C.
84	A. Oct. 1898 F. Dec. 1903	*HEATH, HENRY CUBITT	142, Grange Road, Bermondsey, S.E.
98	A. Oct. 1902 F. May 1910	*HEATH, JOHN LIONEL	Valuer's Department, 38, Lansdowne Road, Tottenham, N.
92	Jan. 1882	HEATON, GEORGE HERBERT ..	Endon, near Stoke-upon-Trent, Staffs.
17	Apr. 1881	HEBBLETHWAITE, LOUIS	Custom House Buildings, Whitefriargate, Hull, Yorkshire.
27	Dec. 1886	HEDLEY, JOHN HUNT	7, Ashbrook Terrace, Sunderland.
40	Feb. 1890	HEELIS, WILLIAM	26, Budge Row, E.C.
47	A. June 1896 F. Sep. 1902	*HEMPHILL, CHARLES GEORGE CATHCART	11, Ely Place, Dublin.
328	Dec. 1886	HENDRIKS, HENRY	61, Temple Row, Birmingham, and 9, Craig's Court, Charing Cross, S.W.
850	Oct. 1910	*HENDRY, ROBERT	25, Herries Road, Maxwellpark, Glasgow.
187	A. Oct. 1903 F. Nov. 1904	*HENNIKER, FREDERICK SIBERT ..	Adelphi Terrace House, Adelphi, W.C.
378	Mar. 1887	HEPPER, JOHN	East Parade, Leeds.
219	Dec. 1884	HERBERT, ALLAN	The Market Place, Andover, Hants.
039	June 1896	*HERN, SAMUEL	93, St. Mary Street, Cardiff, Glamorgan-shire.
435	Jan. 1888	HESKETT, WILLIAM JAMES	St. Andrew's Churchyard, Penrith, and Viaduct Chambers, Carlisle.
679	A. Oct. 1894 F. Dec. 1895	*HEWARD, ERNEST JAMES	52, Wickham Road, Brockley, S.E.
120	Oct. 1903	HEWITT, FREDERIC THOMAS BAINES	Royal Engineer Office, Bordon Camp Hampshire.
181	A. Oct. 1907 F. Nov. 1903	*HEWS, THOMAS GREENSLADE ..	8, Clarendon Road, Sketty, Glamorgan-shire.
808	Sep. 1895	HEWSON, GEORGE RAWDON, MAURICE	Dromahair, Co. Leitrim.
107	Feb. 1903	*HIBBERT, JOSEPH VICTOR	77, Croydon Road, Anerley, S.E.
715	Feb. 1890	HICKMAN, THOMAS	College Court, Shrewsbury.
077	May 1891	HICKSON, STEPHEN WESTBY ..	Telephone Buildings, 31, Queen Victoria Street, E.C.
065	Jan. 1884	HIGGINS, FREDERIC	Alford, Lincolnshire.
674	A. Dec. 1889 F. May 1891	*HIGGINS, GEORGE	12, Finchley Rd., St. John's Wood, N.W.
5183	A. Oct. 1907 F. May 1909	*HILL, GEORGE FINLAY BURD ..	18, Woodcote Road, Wallington, Surrey
1311	Mar. 1886	HILL, WILLIAM BURROUGH ..	81, Above Bar, Southampton, Hants.
1303	A. Jan. 1886 F. Mar. 1890	HILLIARD, GEORGE EDWARD ..	Chelmsford.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
1388	Apr. 1887	HILTON, JOHN	30, Budge Row, E.C., and 17, Montpelier Row, Blackheath, S.E.
3545	A. Oct. 1899 F. May 1905	*HINCHSLIFF, EDWARD ROBERT ..	Urban District Council Office, Bangor, Glamorganshire.
2079	Mar. 1891	HINCKS, HENRY THORP	Wigston Hall, Leicester.
3695	A. Oct. 1900 F. Nov. 1901	*HINDMARSH, RALPH FREDERICK ..	Tyne Improvement Commission Engineer's Office, Newcastle-on-Tyne.
2273	Nov. 1891	HINDS, HENRY	57, Queen Street, Ramsgate, Kent.
900	Feb. 1883	HINE, GEORGE THOMAS	35, Parliament Street, S.W., and Victoria Street, Nottingham.
3385	A. Oct. 1898 F. Oct. 1910	*HINKS, HENRY	1, Graham Road, Purley, Surrey.
1783	Apr. 1890	HIPPISLEY, WILLIAM JOHN ..	Northam House, Wells, Somerset.
815	May 1882	HITCHCOX, WILLIAM	Bank Chambers, Newport, Monmouthshire.
4190	A. Oct. 1903 F. Dec. 1910	*SHOARE, ARTHUR JOHN	38, Strathbrook Road, Streatham Common, S.W.
1769	Mar. 1890	HOBBS, JOHN	Estate Office, Ashford, Kent.
518	Dec. 1878	HOBGEN, FRANCIS NEALE	East Street, Chichester, Sussex.
2080	May 1891	HOBGEN, THOMAS CECIL	Highleigh, Sidlesham, near Chichester, Sussex.
888	Feb. 1883	HOBSON, FREDERICK WILLIAM ..	79, Coleman Street, E.C.
5587	Oct. 1909	HODGES, ARTHUR POOL	H.M. Office of Works, Storey's Gate, S.W.
4321	Oct. 1904	HODGSON, HARRY MOORE	25, Bedford Row, W.C.
2810	Sep. 1895	HODSON, GILBERT NEVILLE ..	Ardbrae, Bray, Co. Wicklow.
2809	Sep. 1895	HODSON, RICHARD EDMOND, M.A. (<i>Dublin</i>)	Coolfadda House, Bandon, Co. Cork.
2275	Nov. 1891	HODSON, WILLIAM	472, West Green Road, N.
2081	May 1891	HOGGARTH, ARTHUR	Kendal, Westmorland.
4445	A. Oct. 1904 F. May 1910	*HOGWOOD, DOUGLAS CLARENCE ..	6, Queen Street, Ramsgate, Kent.
1155	May 1884	HOLIDAY, FREDERICK DEAN ..	Bicester, Oxfordshire.
2587	A. Oct. 1893 F. Feb. 1897	*HOLIDAY, PERCY CAVE	Bicester, Oxfordshire.
3387	A. Oct. 1898 F. July 1901	*HOLL, MACKINTOSH MELENG ..	c/o Stewart Holl & Co., 22, Great Helen's, E.C.
893	A. Feb. 1883 F. Nov. 1889	HOLLAND, THOMAS JAMES, JUN.	14, Raleigh Gardens, Brixton Hill, S.W.
2278	Nov. 1891	HOLLOWAY, HARRY HOWNAM ..	Market Harborough, Leicestershire.
2279	Nov. 1891	HOLMAN, GEORGE EDWARD ..	6, King's Bench Walk, Temple, E.C.
2009	Mar. 1891	HOLMES, MONTAGU	33, Paternoster Row, E.C.
3845	A. Oct. 1901 F. July 1907	*HOLMES, MONTAGU PRICE	33, Paternoster Row, E.C.
2811	Sep. 1895	HOLMES, WILLIAM EDEN	
2281	Nov. 1891	HOMAN, FRANKLIN GEORGE ..	184, Eastgate, Rochester, Kent.
1595	A. Feb. 1889 F. May 1897	*HOMAN, HUBERT FRANKLIN ..	184, Eastgate, Rochester, Kent.
1741	Feb. 1890	HONEYBALL, FRED. THOMAS ..	Deal, Kent.

lp. No.	Date of Election and of Transfer.	FELLOWS.	Address.
46	A. Oct. 1901	*HOOD, HERBERT CHARLES..	8, Union Court, Old Broad Street, E.C.
01	F. May 1903		
	A. Oct. 1896	*†SHOOD, THOMAS, JUN. ..	Ras-el-Khalig, Egypt.
	F. Dec. 1900		
140	June 1896	*HOOD, WALTER RICHARD ..	8, Union Court, Old Broad Street, E.C.
147	A. Oct. 1899	*HOOLEY, ARTHUR JOHN ..	The College, All Saints', Derby.
	F. July 1901		
197	A. Oct. 1900	*HOOPER, ALFRED EGBERT..	10, High Street, Marlborough, Wiltshire.
	F. June 1903		
146	A. Jan. 1888	*HOOPER, CECIL HENRY ..	South Eastern Agricultural College, Wye, Kent.
	F. Jan. 1896		
364	A. Oct. 1895	*†HOOPER, EDGAR WILFRED ..	Haslemere, Beemfort Road, Reigate, Surrey.
	F. Nov. 1899		
548	A. Oct. 1899	*HOPE, ARTHUR ERNEST ..	Great Eastern Railway Land Agent's Office, Liverpool Street Station, E.C.
	F. Oct. 1900		
644	Dec. 1889	HOPKINS, ALFRED JAMES ..	37, Mortimer St., Cavendish Square, W.
847	A. Oct. 1901	*HOPKINS, PERCY RAYNES..	6, Ely Place, Dublin.
	F. June 1909		
282	Nov. 1891	HOPKINSON, ALFRED, A.M.I.C.E.	15, Agur Street, Bury, Lancashire.
010	Mar. 1891	HORNE, EDMUND ..	High Street, Hounslow, Middlesex.
794	Apr. 1882	*HORNE, W. EDGAR, M.P. (President) ..	5, Tilney Street, W.
390	May 1887	HORNOR, CHARLES JARED..	32, Prince of Wales' Road, Norwich.
391	May 1887	HORNOR, FRANCIS ..	Queen Street, Norwich.
370	Oct. 1908	HORSBRUGH, CHARLES EDWARD	Blairquhosh, Blanefield, Glasgow.
826	May 1890	HORSEY, FREDERICK JOHN TERRY	11, Billiter Square, E.C.
761	Mar. 1890	HORSFALL, RICHARD EDGAR ..	22A, Commercial St., Halifax, Yorkshire.
720	A. Oct. 1905	*HORSFIELD, JOHN NIXON, A.R.I.B.A.	Parliament Chambers, Westminster, S.W., and Arden, Portsmouth Avenue, Thames Ditton, Surrey.
	F. May 1909		
848	A. Oct. 1901	*§HOSEGOOD, ANDREW WEBBER..	Williton, Somerset.
	F. Nov. 1905		
2812	Sep. 1895	HOSFORD, EDWARD HENRY POE	76, George Street, Limerick.
849	A. Oct. 1901	*HOSKINS, MARCUS ..	4, Gore Terrace, Swansea, Glamorgan- shire.
	F. July 1902		
1722	A. Oct. 1905	*HOUGHTON, JOHN GOLDSMITH ..	Studland, Woodside Road, Woodford Wells, Essex.
	F. Apr. 1911		
3505	Oct. 1899	*HOUGHTON, THOMAS MARCUS ..	311, Clapham Road, S.W.
1940	Jan. 1891	HOUGHTON, WILLIAM..	58, Old Broad Street, E.C.
1587	Feb. 1889	HOVENDEN, HENRY EDWARD ..	172, Bishopsgate, E.C.
2085	May 1891	HOWARD, HARRY ..	Town Offices, Littlehampton, Sussex.
3297	Feb. 1898	HOWATT, WILLIAM ..	146, Buchanan Street, Glasgow.
3236	A. Oct. 1897	*HOWLAND, ARTHUR FRANK ..	30, Somerset Street, Portman Square, W.
	F. Nov. 1906		
171	A. Feb. 1869	HUBBERSTY, HENRY ALFRED ..	Buxton, Derbyshire.
	F. Mar. 1883		
936	Apr. 1883	HUDSON, ARTHUR BYRNE..	41, Chelsham Road, Clapham, S.W.
5597	Oct. 1909	HUGGARD, WILLIAM ..	Clounalour, Tralee, Co. Kerry.
1609	Mar. 1889	HUGMAN, CHARLES EADY ..	9, Adam Street, Adelphi, W.C.

† Special Forestry Certificate.

† Special Sanitary Science Certificate.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2087	May 1891	HUMPHREYS, JOHN HENRY ..	Castle House, Usk, Monmouthshire.
5192	A. Oct. 1907 F. Nov. 1910	*HUNNINGS, ARTHUR	Rating Surveyor's Office, Town Hall Hackney, N.E.
4887	Oct. 1906	*HUNT, FRANK WILLIAM	9, Spring Gardens, Charing Cross, S.W.
2088	May 1891	HUNT, FREDERICK COPE	6, Queen Anne's Gate, Westminster, S.W.
2287	Nov. 1891	HUNT, FRED. WM. H., F.R.I.B.A.	30, York Place, Portman Square, W.
3551	A. Oct. 1899 F. Dec. 1902	*HUNT, GEORGE WHITAKER ..	Estate Office, Holme Lacy, Herefordshire.
2089	May 1891	HUNT, THOMAS	Baldock Street, Ware, Herts.
1941	Jan. 1891	HUNTER, CECIL	Cricklewood, N.W.
2288	Nov. 1891	HURRELL, JOHN WEYMOUTH ..	25, Brazenose Street, Manchester.
4005	A. Oct. 1902 F. Oct. 1910	*HUSKINSON, ERNEST AMPHLETT	Epperstone, near Nottingham.
1016	A. Dec. 1883 F. Jan. 1891	HUSKINSON, THOMAS WILLIAM..	Epperstone Manor, Nottingham.
5365	Oct. 1905	HUSON, ERNEST WILLIAM.. ..	Director of Works Department Admiralty, S.W.
1182	A. May 1884 F. Dec. 1889	HUSSEY, ROBERT.. . . .	Birch Garth, Mickleover, Derbyshire.
5699	A. Oct. 1909 F. Jan. 1911	*HUTCHINGS, WILLIAM ARTHUR..	The Hollies, Sutton Coldfield, Warwickshire.
5610	Oct. 1909	*HUTCHINS, JAMES BUSHELL ..	22, Lord Street, Liverpool.
563	Jan. 1880	P'ANSON, EDWARD BLAKEWAY, F.R.I.B.A. (<i>Member of Council</i>)	7A, Laurence Pountney Hill, E.C.
3853	A. Oct. 1901 F. Dec. 1910	*INGRAM, CECIL WALTER	Messrs. W. Brown & Co., Tring, Herts.
4195	A. Oct. 1903 F. Apr. 1911	*INGRAM, JAMES FRANCIS	26, Victoria Street, Grimsby, Lincolnshire.
305	A. Feb. 1873 F. Jan. 1882	INGRAM, WALTER FEILDE	2, St. Andrew's Place, Lewes, Sussex.
834	Dec. 1882	INMAN, MARSHALL NISBET.. ..	7, Bedford Row, W.C.
2291	Nov. 1891	IRELAND, EDWIN BENJAMIN ..	Guestwick, East Dereham, Norfolk.
2819	Sep. 1895	IRVINE, HENRY, LIEUT.-COL. ..	Strathlomond, Omagh, Co. Tyrone.
3191	Oct. 1897	*ISTED, SAMUEL EVELAND	6, Merton Road, Southsea, Hampshire.
122	Oct. 1903	JACKSON, HENRY.. . . .	Conservator of Forests, Naini Tal, United Provinces of Agra and Oudh India.

p. o.	Date of Election and of Transfer.	FELLOWS.	Address.
11	Oct. 1905	*JACKSON, ROBERT	Estate Office, Wroughtington, near Wigan, Lancashire.
14	Dec. 1887	JACKSON, WILLIAM TRESS	117, High Street, Sittingbourne, Kent.
31	Oct. 1908	*JACOB, LOUIS, A.R.I.B.A.	Raymond House, Theobald's Road, W.C.
93	Nov. 1891	JAMES, CHRISTIAN HUGH	Rudchester, Wylam-on-Tyne, Northumberland.
53	Feb. 1906	JAMES, FREDERICK JOHN	1, Rusham Road, Wandsworth Common, S.W.
31	A. Oct. 1905 F. Nov. 1909	*JAMES, GEORGE ERNEST	38, Lansdowne Road, Tottenham, N.
03	Oct. 1905	JAMES, MERTON JOHN	63, Melody Road, Wandsworth Common, S.W.
20	Sep. 1895	JAMESON, ROBT. WILLIAM	
84	A. Oct. 1894 F. June 1899	*JARMAN, WILLIAM	Fairfield, Hatch End, Pinner, Middlesex.
27	A. Nov. 1892 F. Oct. 1898	*JARMAN, FRANK WILMOT	4, Wellesley Court Road, Croydon.
102	Jan. 1886	JEANS, MARK	Marlborough, Wilts.
51	Oct. 1910	*JEFFERIES, HENRY CHARLES	Shaftesbury Lodge, Beccles, Suffolk.
88	A. Oct. 1893 F. Nov. 1895	*JEFFREE, SYDNEY	13, Clifford's Inn, E.C.
967	A. Oct. 1895 F. May 1897	*JENKIN, ARTHUR PEARSE	Trewirgie, Redruth, Cornwall.
294	Nov. 1891	JENKINS, OSWALD	24, Rectory Road, Sutton Coldfield, Warwickshire.
238	A. Oct. 1897 F. Dec. 1903	*JENKINS, RICHARD JAMES	Town Hall, Portsmouth.
858	Oct. 1906	*JENKINS, WILLIAM DAVID	George Street, Llandilo, South Wales.
589	A. Oct. 1893 F. Nov. 1895	*JENKINSON, JOHN	The Hollies, Hopwas, Tamworth, Staffordshire.
160	A. Feb. 1897 F. Mar. 1899	*JENKINSON, WILLIAM ERIC LEIGH	30 and 31, New Bridge Street, Ludgate Circus, E.C.
736	Feb. 1882	JENKINSON, WILLIAM WILBERFORCE	30 and 31, New Bridge Street, Ludgate Circus, E.C.
685	A. Oct. 1894 F. Nov. 1897	*JENNER, WILLIAM	6, Gluman Gate, Chesterfield, Derbyshire.
048	A. June 1896 F. June 1900	*JENNINGS, FITZ-LAURENCE PERCIVAL DUDLEY	34, Osnaurgh Street, N.W.
012	Mar. 1891	JENNINGS, WILLIAM JOSEPH	4, St. Margaret's Street, Canterbury.
062	Oct. 1896	JEROME, THOMAS STROUD, LIEUT-COLONEL, I.S.O.	Mandora, Effingham Road, Surbiton, Surrey, and Horse Guards, Whitehall, S.W.
529	A. Nov. 1892 F. Nov. 1896	*JOHNSON, BERNARD MARR	5, Great College Street, Westminster Abbey, S.W.
239	A. Oct. 1897 F. June 1910	*JOHNSON, HARRY LABRON	9, Grafton Road, New Brighton, Cheshire.
963	A. May 1883 F. Jan. 1885	*JOHNSON, HENRY	34 and 36, Gresham Street, E.C.
847	Feb. 1906	JOHNSON, HENRY JAMES	21, Queen Anne's Gate, S.W.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2821	Sep. 1895	JOHNSON, JOCELYN OTWAY ..	Eltham Lodge, Cheltenham, Gloucestershire.
3392	A. Oct. 1898 F. July 1903	*JOHNSTON, REGINALD ..	133-136, High Holborn, W.C.
4011	A. Oct. 1902 F. Jan. 1904	*JOHNSTONE, AUGUSTUS FREDERIC ..	39, Merville Place, Kingstown, Co. Dublin.
3466	Feb. 1899	JOHNSTONE, JAMES	Alloway Cottage, Ayr.
3702	A. Oct. 1900 F. Feb. 1901	*JONAS, HAROLD DRIVER ..	23, Pall Mall, S.W.
1463	A. Feb. 1888 F. May 1891	*JONAS, HARRY MARSHALL ..	8A, Whitehall Place, S.W., and Market Hill, Cambridge.
195	A. Apr. 1869 F. Feb. 1878	JONAS, HENRY	23, Pall Mall, S.W.
4012	A. Oct. 1902 F. Nov. 1909	*JONAS, ROBERT COLLIER ..	23, Pall Mall, S.W.
4013	A. Oct. 1902 F. Nov. 1905	*JONES, ARTHUR ERNEST ..	Hawthorne House, Merrial Street, Newcastle, Staffordshire.
1265	Apr. 1885	JONES, CHARLES, M.I.C.E. ..	The Lodge, Culmington Road, Ealing
777	Mar. 1882	JONES, CHARLES FREDERICK ..	Eldon Chambers, 30, Fleet Street, E
3103	A. Oct. 1896 F. Dec. 1898	*JONES, ERNEST JOEL	199, Maida Vale, W.
1703	Jan. 1890	JONES, FRANCIS WILLIAM ..	2, Frewin Court, Corn Market St., Ox
964	A. May 1883 F. Nov. 1886	*JONES, HENRY ARTHUR ..	49, Bedford Street, Strand, W.C.
1849	Nov. 1890	JONES, ISAAC M., M.I.C.E. ..	The Town Hall, Chester.
3393	A. Oct. 1898 F. Feb. 1901	*JONES, JOHN ARTHUR ..	72, Grafton Road, East Acton, W.
4736	A. Oct. 1905 F. Oct. 1907	*JONES, JOHN FOX	44, Willifield Way, Golder's Green, N.
4014	A. Oct. 1902 F. Nov. 1909	*JONES, JOHN RICE	Valuer's Office, Victoria Chambers, Parade, Neath, Glamorganshire.
673	A. Dec. 1881 F. May 1891	JONES, THOMAS, M.I.C.E. ..	5, Little George Street, Westminster, S
5481	A. Oct. 1901 F. June 1911	*JONES, URWICK MEREDITH ..	Clyro, Upland Road, Selly Park, Birmingham.
2013	Mar. 1891	JONES, WILLIAM EDWARD ..	Anglesey Estate Office, Graig, Llanf
2298	Nov. 1891	JOSELAND, CHARLES	Bank Buildings, Kidderminster, Wor
1467	Mar. 1888	JOSEPH, DELISSA, F.R.I.B.A. ..	Portland House, Basinghall Street, E
412	A. Dec. 1875 F. Mar. 1887	KAYE, JOHN EDWARD	Tynedale, Porchester Road, Bour

lp. No.	Date of Election and of Transfer.	FELLOWS.	Address.
84	Oct. 1896	KEARNS, ROBERT MATTHEW ..	H.M. Office of Works, Storey's Gate, S.W.
80	Nov. 1880	KEIRLE, ROBERT, F.R.I.B.A. ..	18, Oakwood Court, Kensington, W.
66	Feb. 1901	*KELLY, JOHN GEORGE ..	West View, Pontefract, Yorkshire.
323	Sep. 1895	KELLY, RICHARD HENRY ..	21, The Mall, Waterford.
77	A. Oct. 1906 F. Nov. 1908	*KELLY, SYDNEY APPLETON ..	9, Wembley Gardens, Aintree, Liverpool.
598	Oct. 1909	KEMPSTER, JOHN, B.A. ..	95, Lower Leeson Street, Dublin.
599	Oct. 1909	KENNEDY, MICHAEL A. ..	Kinkella, Loughrea, Co. Galway.
191	May 1884	KENT, GEORGE EDWARD ..	"Normanhurst," Cavendish Road, Southsea, Hants.
299	Nov. 1891	KENWRICK, GEORGE ..	83, Colmore Row, Birmingham.
240	A. Oct. 1897 F. Apl. 1901	*KERR, JOHN MURRAY ..	Inland Revenue, London City & Midland Bank Chambers, High Street, Lincoln.
332	Oct. 1898	*KERRUISH, WILLIAM MALTBY ..	21, Athol Street, Douglas, Isle of Man.
614	Apr. 1889	KERSEY, ALEX. H., F.R.I.B.A. ..	21, Finsbury Pavement, E.C.
850	Nov. 1890	KIDWELL, JOHN ..	St. Margaret's Bank, Rochester, Kent.
689	A. Oct. 1894 F. Sep. 1903	*KILLICK, ANTHONY EDWARD ..	Terminus Road, Eastbourne, Sussex.
825	Sep. 1895	KINCAID, JOSEPH WESTBY ..	7, Leinster Street, Dublin.
873	Jan. 1883	KING, FRANK HULME ..	Horsham, Sussex.
192	May 1884	KING, HENRY ..	Stourbridge, Worcestershire.
105	A. Oct. 1896 F. Feb. 1901	*KINGSFORD, PERCY HAMILTON ..	24, High Street, Canterbury, Kent.
502	Nov. 1888	KIRBY, EDMUND, F.R.I.B.A. ..	5, Cook Street, Liverpool.
493	A. Feb. 1899 F. Sep. 1903	*KIRBY, FRANCIS JOSEPH ..	5, Cook Street, Liverpool.
201	A. Jan. 1896 F. Nov. 1900	*KIRK, JOHN WRIGHT ..	1, Pimlico Road, S.W.
532	Oct. 1908	*KIRKBY, REGINALD GUY ..	32, John William Street, Huddersfield, Yorks.
5298	Feb. 1898	KIRKWOOD, CHARLES ..	61, West Regent Street, Glasgow.
600	Oct. 1909	KIRWAN, DENIS BIRMINGHAM ..	Dalgin, Tuam, Co. Galway.
303	Nov. 1891	KITTOW, JOHN ..	West Holm, Launceston, Cornwall.
487	Feb. 1892	KNIGHT, EDGAR WALSH ..	57, Halesworth Road, Lewisham, S.E., and Birkbeck Bank Chambers, Chancery Lane, W.C.
201	A. Oct. 1903 F. Oct. 1907	*KNIGHT, FREDERICK WILLIAM ..	38, Parliament Street, S.W.
530	A. Nov. 1892 F. Nov. 1901	*KNIGHT, GEORGE EDWARD ..	3, Lincoln's Inn Fields, W.C.
063	Oct. 1896	KNIGHT, HENRY ST. JOHN, CAPT.	Inspector of Works, Royal Engineer Office, Roberts Heights, Transvaal, South Africa.
556	A. Oct. 1899 F. Sep. 1904	*KNOWLES, GEORGE POTTER, A.M.I.C.E. ..	39, Victoria Street, Westminster, S.W.
853	A. Dec. 1882 F. Dec. 1889	KNOWLES, HENRY ..	Egerton House, The Spa, Gloucester.
611	Oct. 1909	*KNOWLES, LESLIE S. ..	47, Portman St., Moss Side, Manchester.
827	Sep. 1895	KNOX, ALBERT FREDERIC ..	Estate Office, Ballina, Co. Mayo.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2830	Sep. 1895	KNOX, ALBERT HENRY	Estate Office, Ballina, Co. Mayo.
3178	Oct. 1897	KNOX, ALEXANDER	53, Bothwell Street, Glasgow.
2828	Sep. 1895	KNOX, EDWARD ERNEST	8, Milward Terrace, Bray, Ireland.
2829	Sep. 1895	KNOX, ERNEST HENRY	Greenwood Park, Crossmolina, R.S. Co. Mayo.
3467	Feb. 1899	LAING, DAVID TAYLOR	20, Bridge Street, Glasgow.
2971	A. Oct. 1895 F. June 1899	*LAKE, CUTHBERT JOSEPH	9, Stone Buildings, Lincoln's Inn, W. and Hatch End, Middlesex.
3857	A. Oct. 1901 F. May 1910	*LAKE, RALPH JULIAN	Heage House, Crouch Hill, N.
2972	A. Oct. 1895 F. Oct. 1896	*LAKIN-SMITH, ERNEST	Colmore House, 21, Waterloo Street Birmingham.
4017	A. Oct. 1902 F. May 1910	*LAMBERT, ARTHUR JOHN	19, Upper Montagu Street, Montagu Square, W.
1553	A. Jan. 1889 F. Dec. 1891	*LAMBERT, GODFREY CHARLES	10, Basinghall Street, E.C.
2307	Nov. 1891	LAMMIE, GEORGE	138, Hope Street, Glasgow.
1398	Dec. 1887	LANCASTER, CHARLES HOLLAND	Union Offices, Brougham Terrace, W. Derby Road, Liverpool.
2591	A. Oct. 1893 F. Oct. 1899	*LANCASTER, JOHN ROY	85, Gresham Street, E.C.
2090	May 1891	LANE, ERNEST LACAN	81, Old Christchurch Rd., Bournemouth Hants.
1688	Jan. 1890	LANG, CHARLES AUGUSTUS	3, King Street, Cheapside, E.C.
762	Feb. 1882	LANGRIDGE, GEORGE (Past-President).	Tunbridge Wells, Kent, and 28, Queen Street, Cheapside, E.C.
3858	A. Oct. 1901 F. May 1905	LANGRIDGE, WALTER FREDERICK	Tunbridge Wells, Kent, and 28, Queen Street, Cheapside, E.C.
1645	Dec. 1889	LARMUTH, GEORGE HORATIO	Wilton Chambers, 10, St. Ann's Square Manchester.
3559	A. Oct. 1899 F. July 1903	*LATHAM, ALBERT TUMMONS	100, High Street, Croydon.
2015	Mar. 1891	LATTER, HUGH ROBINSON	The Town Hall, Bromley, Kent.
145	Nov. 1868	LAURANCE, JOHN	Shortacre, Peterborough, Northamptonshire.

No.	Date of Election and of Transfer.	FELLOWS.	Address.
1	May 1891	LAWRANCE, WALTER	14, Tavistock Square, W.C.
4	Jan. 1891	LAWRENCE, ARTHUR	Great Marlow, Bucks.
1	A. Oct. 1902	*LAWRENCE, CHARLES PHILLIPS ..	8, Carleton Gardens, Stanwix, Carlisle.
0	F. Dec. 1910		
	A. Oct. 1901	*LAWRENCE, JOHN, N.D.A.	Messrs. Crawter, Cheshunt, Hertfordshire.
	F. Oct. 1907		
9	A. Dec. 1883	LAWRENCE, WILLIAM ROBERT ..	57 and 58, Chancery Lane, W.C.
	F. Nov. 1889		
97	A. Oct. 1898	*LEAKE, ROBERT	Scarsdale, The Mall, Southgate, N.
	F. Nov. 1907		
06	A. Oct. 1903	*LEANING, AUBREY RUPERT SIDNEY	Kingsgate House, 115, High Holborn, W.C.
	F. Sep. 1904		
70	A. Jan. 1891	*LEANING, HENRY JOHN	28, John Street, Bedford Row, W.C.
	F. Mar. 1895		
90	A. Oct. 1894	*LEANING, WILLIAM ARTHUR ..	28, John Street, Bedford Row, W.C.
	F. Nov. 1895		
45	Oct. 1894	*LEATHER, GEORGE HERBERT ..	North British Buildings, East Parade, Leeds.
44	A. Oct. 1897	*LEATHER, WILLIAM BEAUMONT ..	The Hollies, Leeds.
	F. Oct. 1900		
32	Feb. 1874	LEE, FREDERICK	12, Little College Street, S.W.
54	A. Jan. 1887	*LEE, JOHN WILFRID	Town Hall, Haverstock Hill, N.W.
	F. Nov. 1893		
90	Feb. 1884	LEE, WILLIAM	143½, High Street, Guildford.
59	A. Oct. 1901	*LEE-NORMAN, ALEXANDER HENRY	Estate Office, Rush, Co. Dublin.
	F. Feb. 1904		
27	Oct. 1895	*LEEDER, ERNEST HOLTHAM ..	46, Waterloo Street, Swansea, Glamorganshire.
60	A. Oct. 1901	*LEES, FRANK ARTHUR	District Valuer's Office, High Wycombe, Bucks.
	F. Nov. 1906		
04	Oct. 1905	LEEST, FREDERICK CHARLES ..	H.M. Admiralty, S.W.
32	Oct. 1904	LE FANU, VICTOR CHARLES ..	Estate Office, Bray, Co. Wicklow.
336	Dec. 1882	LEMON, SIR JAMES, M.I.C.E., F.R.I.B.A.	Lansdowne House, Castle Lane, Southampton.
717	Jan. 1882	LEPPER, JOHN HARRAGE	10, Market Square, Bromley, Kent.
298	A. Jan. 1873	LERMIT, ALFRED WILLIAM	Kukub Rubber Estates Co., Ltd., Ayer Massin, Kukub Johore, F.M.S.
	F. Apr. 1882		
933	A. Feb. 1902	*LESLIE, HENRY GEORGE, A.R.I.B.A.	34 Ely Place, Holborn Circus, E.C.
	F. May 1905		
331	Oct. 1904	L'ESTRANGE, HENRY G.	The Estates Office, Sligo.
339	Feb. 1908	LIGHTBODY, FORREST HAY ..	56, Queen Street, Edinburgh.
547	Dec. 1881	LIGHTFOOT, FRANCIS LOWRY, B.A. (Oxon)	549-550, Salisbury House, London Wall, E.C.
901	Feb. 1883	LIGHTFOOT, HENRY LE BLANC, M.A. (Oxon)	Corpus Christi College, Oxford.
461	Dec. 1889	LINAKER, CHARLES EDWARD ..	Frodsham, Cheshire.
710	A. Oct. 1900	*LISNEY, HARRY	The General Valuation Office, 6, Ely Place, Dublin.
	F. May 1909		
405	Dec. 1887	LISTER-KAYE, CHARLES WILKINSON	Osberton, Worksop, Notts.
810	Nov. 1891	LITTLE, WILLIAM	Hutton Hall, Penrith, Cumberland.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
949	A. May 1883 F. Apr. 1888	LITTLE, WILLIAM DAVIS	Middleton Stoney, Bicester, Oxon.
4208	A. Oct. 1903 F. Jan. 1909	*LIVING, ROBERT	High Street, Hornchurch, Essex.
4462	A. Oct. 1904 F. Apr. 1911	*LLEWELLYN, ARTHUR HENRY ..	Valuer's Office, 3, Offa Street, Hereford.
2834	Sep. 1895	LLOYD, AVERELL	Benburb, Moy, Co. Tyrone.
3399	A. Oct. 1878 F. Dec. 1901	*LLOYD, DONALD	3, Arlington Street, Piccadilly, W.
4463	A. Oct. 1904 F. Jan. 1911	*LOBAN, GUSTAVUS TAYLOR ..	18, Bennett's Hill, Birmingham.
648	Dec. 1881	LOCK, WILLIAM HENRY	Instow, North Devon.
3468	Feb. 1899	LOCKHART, PETER	Heads Nook, Carlisle, and Viaduct Chambers, Carlisle.
3564	A. Oct. 1899 F. Nov. 1903	*LOFTHOUSE, ALBERT WILSON ..	Woodcroft, Marton, S.O., and 129, Alber Road, Middlesbrough, Yorkshire.
1164	A. May 1884 F. June 1891	LOFTS, HENRY FAIRLAM	130, Mount St., Grosvenor Square, W.
3469	Feb. 1899	LOGAN, JAMES	Coltness, Wishaw, Lanarkshire.
3565	A. Oct. 1899 F. Nov. 1900	*LOMAS, ALBERT DANIEL	Estate Department, Lancashire and Yorkshire Railway, Manchester.
4333	Oct. 1904	LONGFIELD, HENRY FOSTER ..	Grange Erin, Douglas, Cork.
5837	Oct. 1910	LONG, LELAND	Director of Works Department, Admiralty, Whitehall, S.W.
2462	A. Nov. 1891 F. July 1895	*LONGSDON, ERNEST MOREWOOD	The Hollow, Little Longstone, Bakewell, and 6, Gluman Gate, Chesterfield, Derbyshire.
1138	Apr. 1884	LOOKER, JOHN	The Terrace, Huntingdon.
2314	Nov. 1891	LORING, JOHN	Doddington, Nantwich, Cheshire.
1396	Nov. 1887	LOVEGROVE, HENRY, A.R.I.B.A. ..	18, Foxgrove Road, Beckenham, Kent, and 124, High Street, Shoreditch, E.
1126	A. Mar. 1884 F. Feb. 1891	LOW, ROBERT JOHN	St. Albans, Hertfordshire.
2532	A. Nov. 1892 F. June 1897	*LUCAS, JOHN ARCHIBALD, A.R.I.B.A.	Guildhall Chambers, High Street, Exeter.
1648	Dec. 1889	LUCAS, WILLIAM EDWARD	Bexley, Kent.
1742	Feb. 1890	LUDLOW, COLONEL WALTER ROBERT, C.B.	19, Temple Street, Birmingham, and Dorridge, Knowle, Warwick.
3567	A. Oct. 1899 F. June 1900	*LUKER, DYNELEY	19, Basinghall Street, E.C.
5601	Oct. 1909	LYLE, SYDNEY J.	Ballycastle, Co. Antrim.
2095	May 1891	LYNAM, CHARLES, F.R.I.B.A. ..	Stoke-on-Trent, Staffordshire.
5612	Oct. 1909	*LYNAM, GEORGE TROTTER ..	Town Hall, Burton-on-Trent.
3569	A. Oct. 1899 F. Jan. 1903	*LYNES, HUMPHREY DOD	The Halkyn Estate Office, Holywell, Flintshire.
4025	A. Oct. 1902 F. June 1909	*LYON, MICHAEL LEWIS	25, Great James Street, Bedford Row, W.C.
3308	Feb. 1898	LYONS, FRANCIS OLIVER, M.A. (Dublin)	6, Ely Place, Dublin.
1743	Feb. 1890	LYWOOD, EDWIN	16, Weyhill Road, Andover, Hants.

Date of Election and of Transfer.	FELLOWS.	Address.
Nov. 1891	MACCALLUM, ALEXANDER DUNCAN	132, West Nile Street, Glasgow.
Feb. 1899	McCALLUM, JAMES	Town Hall, Motherwell, Lanarkshire.
June 1896	M'CLINTOCK, ARTHUR.. .. .	18, Nassau Street, Dublin.
Oct. 1904	McCLURE, ROBERT	Estates Office, Glenhazel, Kenmare, Co. Kerry.
Nov. 1891	McCRACKEN, WILLIAM	Englesea House, Crewe.
Sep. 1895	McDONALD, ALLAN, M.A. (<i>Dublin</i>)	Glenarm, Co. Antrim.
A. Dec. 1889 F. Mar. 1895	*§MACDONALD, ARTHUR, M.A. (<i>Cantab.</i>)	Tring, Herts.
Feb. 1899	MACDONALD, RANALD RODERICK	16, Union Terrace, Aberdeen.
May 1891	MACDOUGALL, ROBERT	63, John Street, Glasgow.
Feb. 1908	MCHARRIE, STAIR	Rephad, Stranraer, Wigtownshire.
A. Oct. 1907 F. May 1909	*McILWRAITH, JOHN FORSYTH ..	11, Benet Street, Cambridge.
Feb. 1910	McINTOSH, RICHARD	Chumba, Punjab, India.
Oct. 1908	McLAREN, JOHN THOMAS	The Leuchold, Dalmeny Park, Edinburgh.
Feb. 1908	McMICHAEL, JAMES, JUN.	1, Argyll Arcade, Glasgow.
Oct. 1895	*MACNICOLL, DOUGLAS HENRY ..	Derwas, Abergele, Denbighshire.
Feb. 1899	MACPHERSON, WILLIAM	Montrose Estates Office, Catter House, Drymen, Stirlingshire.
Nov. 1891	†MADGE, JOHN	Somerset House, Chard, Somersetshire.
A. Oct. 1903 F. Apr. 1911	*MADGE, WILFRID	Valuer's Department, 4, Lancaster Place, W.C.
A. Oct. 1900 F. Feb. 1908	*MAGGS, LEONARD	The Hollies, Walnut Grove, Radcliffe-on-Trent, Nottinghamshire.
Jan. 1896	MAHON, GEORGE GILBERT.. ..	The Rent Office, Ahascragh, Co. Galway.
A. Oct. 1905 F. June 1911	*MAKINS, JAMES VINCENT.. ..	30, George Square, Glasgow.
Oct. 1908	MALCOLM, GEORGE	Invergarry, Inverness-shire.
Oct. 1904	*MALTBY, CHARLES MIDLAM	Albert Gate Mansions, 201, Knightsbridge, S.W.
Jan. 1869	MANN, CHARLES JOHN.. .. .	50, Parliament Street, S.W.
Nov. 1891	MANN, JABEZ, A.M.I.C.E.	Sevenoaks, Kent.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
1784	Apr. 1890	MANN, J. BAGSHAW	12, Lower Grosvenor Place, S.W.
1554	A. Jan. 1889 F. Feb. 1893	*MANN, ROBERT BAGSHAW.. ..	50, Parliament Street, S.W.
1947	Jan. 1891	MARKS, HYMAN	19, Ludgate Hill, E.C.
2839	Sep. 1895	MARMION, THOMAS HENRY.. ..	Estates Office, Cappoquin, Co. Waterfo
5503	A. Oct. 1908 F. Oct. 1909	*MARSDEN, JOHN WILLIAM.. ..	Inland Revenue, 78, King Street Manchester.
626	A. Nov. 1881 F. Nov. 1884	MARSHALL, LIONEL HASLER	Chippenham, Wilts.
1785	Apr. 1890	MARSHALL, PETER	3, Hartshead, Sheffield.
5723	A. Oct. 1909 F. Oct. 1910	*§MARSH, FREDERICK STEPHEN..	Waverley, All Saints' Road, Peterborou
2631	A. Feb. 1894 F. Oct. 1897	*§MARTIN, ALFRED JOHN	18, High Street, Alton, Hants.
976	Nov. 1883	MARTIN, GEORGE DENNIS	3, Pall Mall East, S.W.
1555	A. Jan. 1889 F. Jan. 1896	*§MARTIN, HEBER GAMBLING	Littleport, Isle of Ely, Cambridgeshir
364	Jan. 1875	MARTIN, HOWARD (Past-President)	27, Chancery Lane, W.C., and Elstre Nutfield, Surrey.
3714	A. Oct. 1900 F. Feb. 1905	*MARTIN, JOHN PATTINSON.. ..	63, High Street, Lewes, Sussex.
1649	Dec. 1889	MARTIN, ROBERT FREWEN.. ..	Mountsorrel, Loughborough, Leiceste shire.
2559	A. Oct. 1893 F. Mar. 1898	*MARTIN, SAMUEL.. .. .	Valuation Department, South Lond Division, Duchy Rooms, Somers House, W.C.
1533	A. Dec. 1888 F. July 1892	*†MARTIN, THOMAS	67, Teddington Park, Teddington Middlesex.
1589	Feb. 1889	MARVIN, ALBERT EDWARD.. ..	The Grove, Carisbrooke, Isle of Wigh
3478	Feb. 1899	MARWICK, THOMAS PURVES	43, York Place, Edinburgh.
1598	Mar. 1889	MASON, CHARLES.. .. .	Newton House, Queen Street, Lou Lincolnshire.
1677	A. Dec. 1889 F. June 1903	*MASON, CHARLES WILLIAM HAY- LEY	47, Wellington Road, N.W.
4029	A. Oct. 1902 F. Jan. 1906	*MASON, HERBERT WALTER	The Hutch, Ferndale Road, Banster Surrey.
1091	Feb. 1884	MASON, WILLIAM ARTHUR.. ..	31A, Colmore Row, Birmingham.
1288	A. Dec. 1885 F. Nov. 1888	*MASSIE, FRANK, M.I.C.E.	Tetley House, Kirkgate, Wakefie Yorkshire.
696	Jan. 1882	MASTERMAN, GEORGE HUGHES..	34 and 36, Gresham Street, E.C.
3715	A. Oct. 1900 F. Nov. 1901	*MATHER, JAMES	10, Barnton Gardens, Davidso Mains, near Edinburgh.
995	Dec. 1883	MATHEWS, JOSEPH DOUGLASS, F.R.I.B.A.	11, Dowgate Hill, E.C.
2596	A. Oct. 1893 F. Apr. 1896	*MATHEWS, LEWIS OSLER, M.A. (Cantab.)	12, Waterloo Street, Birmingham.
2840	Sep. 1895	MAUDE, ANTHONY FRITZ	Hillsborough, Co. Down.
2842	Sep. 1895	MAUDE, CHRISTOPHER HUGH	Lenaghan, Enniskillen, Co. Fermana
5602	Oct. 1909	MAUNSELL, GEORGE EDWARD SCARLETT	Donadea Castle, Donadea, Co. Kilda

Date of Election and of Transfer.	FELLOWS.	Address.
Sep. 1895	MAUNSELL, RICHARD EDWARD ..	9, Ely Place, Dublin.
A. Oct. 1901	*MAXWELL, DAVID BENJAMIN ..	Riverside, Great Blakenham, Ipswich.
F. Sep. 1902		
A. Jan. 1887	*MAXWELL, FRANCIS WILLIAM ..	25, Brazennose Street, Manchester.
F. Jan. 1890	MAXWELL, HENRY PERCEVAL ..	Lansdowne Lodge, Kenmare, Co. Kerry.
Sep. 1895	*MAXWELL, JOSEPH ARCHIBALD ..	21, Marlborough Road, Banbury, Oxfordshire.
Oct. 1898		
Nov. 1891	MAY, THOMAS HENRY	Haslin House, Harpur Hill, Buxton, Derbyshire.
A. Oct. 1903	*MAYHEW, ROBERT HENRY	Edmondsbury, Genoa Road, Anerley, S.E.
F. June 1910	JEWERS, A.R.I.B.A.	
A. Oct. 1899	*MEABY, THOMAS JAMES, JUN. ..	Canford Estate Office, Wimborne, Dorsetshire.
F. May 1903		
Jan. 1891	MEADE, THOMAS DE COURCY, M.I.C.E.	The Town Hall, Manchester.
Oct. 1909	MEDCALF, WILLIAM	10, Leinster Street, Dublin.
A. Nov. 1892	*MELLENFIELD, JAMES HENRY ..	517, Hackney Road, N.E.
F. Aug. 1893		
Dec. 1879	MELLERSH, ALFRED WILLIAM ..	Godalming, Surrey.
Jan. 1891	MELLOR, THOMAS HENRY .. .	1, Laurence Pountney Hill, E.C.
A. Jan. 1888	*†MELROSE, FRANK	28, Martin's Lane, Cannon Street, E.C.
F. Sep. 1902		
Mar. 1887	MENZIES, WILLIAM	Golspie, Englefield Green, Surrey.
A. Oct. 1894	*MERCER, CHARLES EDWARD ..	Estate Office, S.E. Railway, Tooley St., London Bridge Station, S.E.
F. June 1897		
Oct. 1904	MEREDITH, LEWIS BOYLE .. .	Craiginnonna, Bray, Co. Wicklow.
A. Jan. 1891	*MERRY, ARTHUR WALKER .. .	17, High Street, Leighton Buzzard, Beds.
F. Dec. 1894		
May 1891	MERRY, THOMAS	9, Abington Street, Northampton.
Oct. 1894	*MESSENGER, HENRY	77, Chancery Lane, W.C.
Feb. 1882	MESSENGER, WILLIAM HARRY ..	Town Hall Chambers, Guildford.
Dec. 1884	*†MICHELMORE, ALFRED (Member of Council) .. .	Gate House, Totnes, Devon.
Feb. 1908	MIDDLETON, JAMES	Estate Office, Braehead, Kilmarnock.
Nov. 1888	MIDDLETON, REGINALD EMPSON, M.I.C.E.	17, Victoria Street, S.W.
Nov. 1891	MILLAR, WILLIAM GALT .. .	1, Arcade Chambers, Reading.
Oct. 1896	*MILLER, JOHN EZRA, A.M.I.C.E. ..	4, Brookside Ter., Sunderland, Durham.
A. Oct. 1900	*MILLS, ARTHUR ERNEST .. .	General Valuation Office, 6, Ely Place, Dublin.
F. Dec. 1903		
May 1884	MILLS, SAMUEL MEALING .. .	51, London Street, Norwich.
Feb. 1886	MILLS, WILLIAM EDWARD .. .	57, Hamilton Square, Birkenhead, Cheshire
Nov. 1891	MILLYARD, JOHN WILLIAM .. .	Estate Office, Saltmarshe Castle, Bromyard, Herefordshire.
A. Nov. 1891	*MITCHELL, GEORGE SHARMAN ..	Broadbridge Place, Horsham, Sussex.
F. Oct. 1892		

† Special Sanitary Science Certificate.

‡ Special Forestry Certificate.

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4215	A. Oct. 1903 F. June 1911	*MITCHELL, HAROLD HASTINGS ..	2, North Parade, Cheltenham, Gloucestershire.
1232	A. Dec. 1884 F. Nov. 1890	*MIXER, EDWARD.. .. .	Ilchester House, Uxbridge Road, Station, W.
1718	Feb. 1890	MONCKTON, HENRY PERCIVAL, F.R.I.B.A.	32, Walbrook, E.C.
2330	Nov. 1891	MONIER-WILLIAMS, STANLEY FAITHFULL, A.R.I.B.A. . . .	47A, Eccleston Place, S.W.
5097	Oct. 1907	*MONSON, EDWARD CHARLES PHILIP, F.R.I.B.A.	Finsbury Pavement House, E.C., and 182, High Street, Acton, W.
1951	Jan. 1891	MONTAGU, HENRY HAVELOCK ..	36, Coleman Street, E.C.
4758	A. Oct. 1905 F. June 1910	*MONTGOMERY, WILLIAM ALEXANDER	2, Wellington Place, Belfast.
4034	A. Oct. 1902 F. Nov. 1904	*MOODY, HERBERT JOHN	10, Quedsted Villas, Surrenden Road, Folkestone, Kent.
1771	Mar. 1890	MOODY, THOMAS	4, Suffolk Street, Pall Mall East, S.
1576	Feb. 1889	MOORE, ALFRED	7, Leadenhall Street, E.C., and 33, 1 End Road, E.
1165	A. May 1884 F. May 1888	*MOORE, HAROLD EDWARD.. ..	41, Bedford Row, W.C.
4606	Oct. 1905	MOORE, THOMAS IVOR.. . . .	H.M. War Office, S.W.
2331	Nov. 1891	MORGAN, BENJAMIN BRAUFORD	1, Upper King Street, Norwich.
1772	Mar. 1890	MORRIS, CHARLES	The Lodge, Radcliffe-on-Trent, Nottingham 27, Bridlesmith Gate, Nottingham
1443	Jan. 1888	MORRIS, EDWARD HENRY	Chirbury, Salop.
2332	Nov. 1891	MORRIS, HAROLD GEORGE.. ..	67 and 68, Cheapside, E.C.
2538	A. Nov. 1892 F. Oct. 1894	*MORRIS, RICHARD PERCIVAL ..	21, Montserrat Road, Putney, S.W.
2609	A. Oct. 1894 F. Oct. 1899	*MORRIS, WILLIAM HENRY.. ..	Monksfield, Chirbury, Shropshire.
3671	A. Oct. 1900 F. Oct. 1905	*MORRIS-DAVIES, JAMES GEORGE	Hafod Estate Office, Devil's Bridge, S.O., Cardiganshire.
3872	A. Oct. 1901 F. Mar. 1909	*MORRISON, IVOR CHARLES.. ..	Alma, St. Albans, Herts.
1127	A. Mar. 1881 F. Jan. 1891	MOSS, THOMAS WALTER	7, Gray's Inn Place, W.C.
3065	Oct. 1896	MOXON, HERBERT WILLIAM, MAJOR	R.E. Office, Abbey Field, Colchester Essex.
2145	A. May 1891 F. May 1892	*MÜLLER, JOHN JOSEPH, A.R.I.B.A.	39, Cromwell Avenue, Highgate, N.
4219	A. Oct. 1903 F. Oct. 1910	*MUNDELL, JOSEPH EDWARD, A.R.I.B.A.	157, Wool Exchange, Coleman Street, E.C.
2017	Mar. 1891	MUNDY, HERBERT	Manvers Street, Trowbridge, Wilts.
2334	Nov. 1891	MUNDY, THOMAS EDWARD, A.R.I.B.A.	6, Lincoln Street, Sloane Square, S.
3325	Oct. 1898	MURDOCK, ROBERT	91, Maxwell Road, Glasgow.
2845	Sep. 1895	MURPHY, JAMES FRASER, MAJOR	Estate Office, Boyle, Co. Roscommon
2479	Feb. 1899	MURRAY, JOHN CAMPBELL.. ..	Pollok Estates Office, 216, West George Street, Glasgow.

Date of Election and of Transfer.	FELLOWS.	Address.
Feb. 1899	MURRAY, JOSEPH.. ..	Camperdown Estates Office, Dryburgh, Lochee, Forfarshire.
Jan. 1891	MURRAY, WILLIAM	L.C.C. Education Department, 19, Charing Cross Road, W.C.
Feb. 1899	MURRAY, WILLIAM WATSON ..	Catter House, Drymen, Stirlingshire.
Oct. 1909	MYERS, ALBERT ROBERT	H.M. Office of Works, Edinburgh.
Feb. 1889	NAPIER, HENRY BURROUGHS ..	Ashton Court Estate Office, Long Ashton, Clifton, Bristol (Somerset).
A. Jan. 1869 F. Mar. 1882	NASH, ALFRED JAMES.. ..	Farnham, Surrey.
Oct. 1904	NASH, SIR VINCENT, D.L.	85, George Street, Limerick.
Mar. 1891	NEALE, GEORGE JAMES	13, Lowndes Street, Belgravia, S.W.
Feb. 1879	NEAME, FREDERICK	Macknade, Faversham, Kent.
Apr. 1882	NEATE, ARTHUR WEBB	8, St. Mary's Hill, Newbury, and Hungerford, Berkshire.
Feb. 1906	NEIGHBOUR, WILLIAM FRANCIS..	338-351, Birkbeck Bank Chambers, Holborn, W.C.
A. Oct. 1902 F. June 1904	*NEILL, JAMES NEILL	38, Park Row, Leeds.
A. Oct. 1898 F. Feb. 1900	*NESBITT, JOHN OSCAR.. ..	54, St. Petersgate, Stockport, Cheshire.
May 1891	NEW, EDWARD VORLEY, A.R.I.B.A.	62, George Street, Portman Square, W.
A. Oct. 1907 F. May 1910	*NEWBERY, REGINALD ALFRED ..	Estate Office, Berwick St. James, Salisbury.
A. Oct. 1903 F. Nov. 1908	*NEWBORN, CHARLES REGINALD..	Danum Cottage, Leatherhead, Surrey.
Feb. 1890	NEWILL, ROBERT HENRY	Lydbury North, Shropshire.
Dec. 1885	NEWMAN, ARTHUR HARRISON, F.R.I.B.A.	19A, Tooley St., London Bridge, S.E.
A. Oct. 1902 F. Apr. 1908	*NEWMAN, BERNARD	Holmwood, Uxbridge Road, Ealing Dean, W.
A. Nov. 1892 F. Oct. 1894	*NEWMAN, SAMUEL FRANK.. ..	33 and 34, Savile Row, W.
Nov. 1891	NEWMAN, THOMAS HARRY.. ..	49, High Street, Braintree, Essex.
A. Jan. 1880 F. Apr. 1886	NEWMARCH, HENRY CHARLES ..	61, Lincoln's Inn Fields, W.C.

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2846	Sep. 1895	NEWPORT, GEORGE BELLINGHAM	Rockview, Inistioge, Co. Kilkenny.
739	Feb. 1882	NEWSON, HARRY CARSS	51, Lincoln's Inn Fields, W.C.
3112	A. Oct. 1896 F. Mar. 1899	*NEWTON, EDWIN BENNETT BRIERLEY, M.I.C.E.	Town Hall, Paddington, W.
4224	A. Oct. 1903 F. Jan. 1906	*NEWTON, JAMES WILLIAM	The Lands Branch, Director of War Department, Admiralty, S.W.
1020	A. Dec. 1883 F. Nov. 1889	NEWTON, THOMAS EDWIN	Bank Chambers, Winchester.
3408	A. Oct. 1898	*NICHOLSON, GUY MURRAY	338-351, Birkbeck Bank Chambers, Holborn, W.C.
4612	F. Oct. 1905		
2340	Nov. 1891	NICHOLSON, WILLIAM ABERNETHY	1 and 2, Queen Street, Cheapside, E.C.
2490	Feb. 1892	NOCK, BENJAMIN BOWEN	48, Queen Street, Wolverhampton, Staffordshire.
1974	A. Jan. 1891 F. Apr. 1901	*NOCKOLDS, ALFRED GEORGE	Saffron Walden, Essex.
5383	Oct. 1905	*NORMAN, HERBERT JOHN	Clare Lodge, Southall, Middlesex.
435	Mar. 1876	NORMAN, JAMES MAURICE	Uxbridge, Middlesex.
85	July 1868	NORTH, GEORGE	Lands Improvement Company, 1, George Street, S.W.
958	May 1883	*NORTH, GEORGE FREDERIC	Strathfield Saye, Hampshire.
1569	Jan. 1889	NORTHCROFT, HENRY	338-351, Birkbeck Bank Chambers, Holborn, W.C.
2019	Mar. 1891	NORTON, THOMAS HERBERT, B.A. (Oxon.)	7, Little College Street, Westminster, S.W.
255	Feb. 1871	NOTLEY, RICHARD ALBERT	14, Bow Lane, Cannon Street, E.C.
698	Jan. 1882	NOTLEY, ROBERT PLEDGE, F.R.I.B.A.	11, Paradise Row, Cambridge Road, ..
676	A. Dec. 1881 F. Feb. 1887	NOTTAGE, WILLIAM GRIGGS	Land Registry, Lincoln's Inn Fields, ..
2973	A. Oct. 1895 F. May 1898	*NUTTALL, HERBERT	33, Winckley Square, Preston, Lancashire.
3409	A. Oct. 1898 F. Dec. 1904	*NUTTER, JOHN	2, Marlborough Gardens, Stanthorpe, Carlisle.
2465	A. Nov. 1891 F. Oct. 1894	*OAKLEY, CHRISTOPHER PERCIVAL	Constitutional Club, Northumberland Avenue, W.C.
2020	Mar. 1891	OAKLEY, EDWARD BENJAMIN	Hinton Chambers, Bournemouth, H.

Date of Election and of Transfer.	FELLOWS.	Address.
A. Jan. 1891 F. Dec. 1892	*OAKLEY, JOHN HUBERT (Member of Council)	4 and 5, Charles Street, St. James's Square, S.W.
A. Oct. 1899 F. Apr. 1901	*O'BRIEN, DONOUGH RICHARD ..	16, Upper Mallow Street, Limerick.
A. Jan. 1891 F. Jan. 1894	*OGDEN, MICHAEL GUY	4, Hill Road, Wimbledon, S.W.
A. Oct. 1897 F. Oct. 1899	*OGILVIE, ROBERT MATHEWSON ..	Hayward's Heath, Sussex.
A. Oct. 1906 F. Nov. 1907	*OLDHAM, JAMES	12, Booth Street, Piccadilly, Manchester.
Oct. 1901	OLDRIEVE, WILLIAM THOMAS, F.R.I.B.A.	H.M. Office of Works, Edinburgh.
Nov. 1891	OLIPHANT, GEORGE A. J.	The Grange, Shrewton, Wiltshire.
Nov. 1891	OLIVER, CHARLES EDWARD	Selby Lodge, Consett, Co. Durham.
Feb. 1886	ORGILL, JOHN BERWICK	1, Down Street, Piccadilly, W.
A. Oct. 1898 F. Sep. 1904	*ORWIN, CHARLES STEWART	Estate Office, Panton, Wragby, Lincolnshire.
A. June 1896 F. June 1899	*OSENTON, CHARLES	Leatherhead, Surrey.
A. Oct. 1903 F. Nov. 1909	*†OSMOND-SMITH, FRANCIS HENRY GEORGE, M.R.A.C.	County Council Offices, Cardiff.
A. Nov. 1892 F. Jan. 1905	*OVENDEN, CHARLES	121, Cannon Street, E.C.
Oct. 1910	*OVENDEN, HARRY	126, Bishopsgate, E.C.
Feb. 1906	OVERALL, EDMUND	5, Duke Street, Adelphi, W.C.
A. Oct. 1901 F. June 1908	*OVERTON, WILLIAM HENRY	22, Ship Street, Brighton.
Sep. 1895	OWEN, ARTHUR JOHN	
Feb. 1890	OWEN, HENRY	Dana Chambers, Shrewsbury.
A. Feb. 1884 F. Jan. 1890	OWEN, THOMAS HENRY RULE	High St., Haverfordwest, Pembrokeshire.
Mar. 1869	OWEN, THOMAS RULE	High St., Haverfordwest, Pembrokeshire.
Nov. 1889	OWEN, WILLIAM SCOTT	Cefngwifed, near Newtown, Montgomeryshire.
Mar. 1891	PAGE, GEORGE FREDERICK	Eagle Chambers, Kingston-on-Thames, Surrey.
Jan. 1884	PAGE, ROBERT, F.R.I.B.A.	9, Denman Street, London Bridge, S.E.
A. Oct. 1894 F. Jan. 1898	*†PAGE, STANLEY HATCH	6, Queen Street, Ramsgate, Kent.

† Special Sanitary Science Certificate.

‡ Special Forestry Certificate.

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406	A. Nov. 1875 F. Apr. 1881	PAIN, COARD SQUAREY	51, North John Street, Liverpool, Bebington, Cheshire.
2601	A. Oct. 1893 F. June 1897	*PAIN, GEORGE LLOYD	44, Russell Terrace, Leamington.
966	A. May 1883 F. Oct. 1894	*PAIN, JAMES	48, West Street, Fareham, Hants.
1535	A. Dec. 1888 F. Oct. 1892	*†PALAMOUNTAIN, JOSEPH WM. ..	Cloverley Estate Office, Whitcote Salop.
4228	A. Oct. 1903 F. June 1904	*PALMER, FREDERICK CHARLES RICHARD	The Secretary's Office, General Office (North), E.C.
2495	A. Feb. 1892 F. July 1901	*PALMER, WILLIAM EDWARD KING A.R.I.B.A.	7, Duke Street, Adelphi, W.C.
5344	Feb. 1908	PARK, ALEXANDER	175, Hope Street, Glasgow.
1815	May 1890	PARK, PHILIP	The Park Hotel, Preston, Lancashire.
567	A. Jan. 1880 F. Jan. 1888	PARKER, THE HON. CECIL THOMAS	Eccleston, Chester.
1383	Mar. 1887	PARKER, CHARLES ALFRED	Broad Street House, E.C., and Wood Mortimer Place, Maldon, Essex.
1269	May 1885	PARKER, JOHN, A.M.I.C.E.	Mansion House, Hereford.
2348	Nov. 1891	PARKER, STANLEY	Birkbeck Bank Chambers, High Holborn W.C.
4605	Oct. 1905	PARKER, THOMAS	Director of Works Department, I Admiralty, S.W.
4044	A. Oct. 1902 F. June 1908	*PARKHOUSE, SAMUEL	111, Highlever Road, St. Quintin Park
1853	Nov. 1890	PARKIN, WILLIAM	Babworth, Retford, Notts.
865	Jan. 1883	PARMETER, FRANK	Bowland Lodge, Grainger Park, E Newcastle-on-Tyne.
2104	May 1891	PARNACOTT, ALFRED	The Ferns, Laurel Grove, Penge, & 93, York Road, Westminster B Road, S.E.
3876	A. Oct. 1901 F. May 1909	*PARNWELL, SIDNEY ARTHUR	Great Eastern Railway, Liverpool S E.C.
2022	Mar. 1891	PARR, SAMUEL GEORGE	New Broad Street House, E.C.
1679	A. Dec. 1899 F. Nov. 1893	*PARRIS, CHARLES JOHN	67, High Street, Tunbridge Wells, I and Beechwood, Crowborough, Su
4046	A. Oct. 1902 F. June 1908	*PARRY, ALBERT EDWARD	36, Endlesham Road, Balham, S.W.
1422	A. Dec. 1887 F. Mar. 1891	*PARRY, RICHARD, B.SC. (London), A.M.I.C.E.	82, Victoria Street, S.W.
1855	Nov. 1890	PARSONS, FREDERICK CECIL	163, North Street, Brighton.
4047	A. Oct. 1902 F. June 1908	*PARSONS, MAURICE HARRY DONNE	51, Queen Street, Exeter.
957	A. May 1883 F. Dec. 1888	PARSONS, ROBERT MAURICE PETERS	Misterton, Crewkerne, Somersetshi
1897	A. Nov. 1890 F. Oct. 1894	*PARTRIDGE, EDWARD JOHN	Bank Chambers, 39, George Street, B mond, Surrey, and 50, Lincoln' Fields, W.C.

Date of Election and of Transfer.	FELLOWS.	Address.
A. Oct. 1896 F. Mar. 1899	*PATCH, SHIRLEY HUTCHINS ..	The Chestnuts, Havelock Road, Addiscombe, Croydon.
Oct. 1904	*PATERSON, JOHN SALMON ..	70, Wellington Chambers, Ayr, N.B.
A. Oct. 1901 F. May 1909	*SPATON, DAVID LLEWELLYN ..	Westminster House, St. Stephen's Road, Bournemouth.
A. Oct. 1908 F. June 1910 A. May 1883 F. May 1888 Dec. 1880	*PAUL, ANDREW *PAULL, ALAN PAYNE, ALEXANDER, F.R.I.B.A. ..	56, Brownlow Road, Bounds Green, N. 12, New Court, Carey Street, W.C. Norfolk House, Victoria Embankment, W.C.
Jan. 1882	PAYNE, FREDERICK	10, Market Square, Bromley, Kent.
A. Oct. 1893 F. Jan. 1896	*PEARCE, FRED W.	Surveyor's Office, Town Hall, Twickenham, Middlesex.
A. Oct. 1896 F. Feb. 1901 Nov. 1891	*PEARCE, OCTAVIUS BURROUGHS PEARCE, JOHN GRIGG	Hill Side, Nuneaton, Warwickshire. North Curry, near Taunton, Somersetshire.
A. Oct. 1902 F. Dec. 1904 Nov. 1891	*PEARSE, THOMAS WILLIAM .. PEARSE, WILLIAM	The Green, Modbury, South Devon. Stoliford, Modbury, Devon.
A. Oct. 1895 F. Oct. 1896	*PEARSON, HARRY JOHN, A.R.I.B.A.	Architectural Department, Local Government Board, Whitehall, S.W.
A. Oct. 1893 F. Jan. 1895 A. Oct. 1898 F. July 1907 May 1885	*PEARSON, T. HOWARD *PEASE, CHARLES EDWARD .. PECK, WILLIAM ROLAND	Lindridge, Tenbury, Worcester. 16, Clifford's Inn, Fleet Street, E.C. Whitehayes, Chorley Wood, Hertfordshire.
A. Oct. 1897 F. Sep. 1904	*PEEBLES, PHILIP	Shanghai Land Investment Co., Ltd., 2, Jinkee Road, Shanghai, China.
Nov. 1891 Nov. 1891 May 1891 Dec. 1889	PEIRSON, GEORGE BRODRICK .. PEIRSON, HENRY THOMAS .. PELLS, ARTHUR PEMBERTON, CHARLES OLIVER	Baldersby, S.O., Yorkshire. Brancepeth, Co. Durham. 13, London Road, Beccles, Suffolk.
Sep. 1895	PAGET	Tyringham, Newport Pagnell, Bucks.
A. Oct. 1903 F. Dec. 1909 A. Dec. 1886 F. May 1891 A. Oct. 1900 F. Jan. 1908 May 1891	PENROSE, JAMES EDWARD .. *PEPLER, GEORGE LIONEL .. *SPERKINS, WALTER FRANK, M.P.. *PERKS, HUGH EARL PERRIAM, ALFRED JOSEPH ..	Estate Office, Lismore Castle, Lismore. 3, Pall Mall East, S.W. 17, Above Bar, Southampton. 2, St. Paul's Square, Bedford. 13, Quadrant Road, Thornton Heath, Surrey.
A. Oct. 1899 F. June 1911	*PETCH, JOHN STONEHOUSE ..	Estate Office, Broughton, Skipton, Yorkshire.
Feb. 1885	*PETO, JAMES WINDER	6, Market Place, Reading.
A. Oct. 1901 F. Dec. 1902 Oct. 1910	*PETTER, ALBERT EDWARD .. PHIBBS, HARRY	Moray Villa, Fishponds, Bristol. 6, Ely Place, Dublin.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
1652	Dec. 1889	PHILLIPS, WILLIAM EDWIN ..	Eagle Chambers, Kingston-on-Thames Surrey.
1043	Jan. 1884	PICKERING, WILLIAM CLOVES ..	Rhewl House, Mostyn, Flintshire.
968	A. May 1883 F. Nov. 1886	*†PILDITCH, PHILIP EDWARD ..	2, Pall Mall East, Charing Cross, S.W.
3882	A. Oct. 1901 F. June 1910	*PILDITCH, WILLIAM THOMAS ..	4, Wellesley Court Road, Croydon.
1899	A. Nov. 1890 F. July 1901	*PINDER, RICHMOND	49, Upper Baker Street, N.W.
3253	A. Oct. 1897 F. Oct. 1900	*PINEGER, JAMES REGINALD ..	6, Mount Street, Grosvenor Square, W.
1704	Jan. 1890	PINKS, EDWIN CHARLES	Parliament Mansions, Victoria St., S.W.
3119	A. Oct. 1896 F. Oct. 1897	*PINNEY, FREDERICK WYLBORNE DIGBY	6, Waterloo Street, Birmingham.
3883	A. Oct. 1901 F. Nov. 1908	*PINSENT, FRANCIS WINGFIELD HOMFRAY	Inland Revenue, Barclay's Bank Chambers, Plymouth.
2023	Mar. 1891	POPPLER, JOHN	19, St. Hilda's Terrace, Whitby, York shire.
2359	Nov. 1891	PORTER, JOHN MERRY	Estate Office, Colwyn Bay, North Wales.
5016	A. Oct. 1906 F. Feb. 1908	*PORTER, OLIVER JOHN	62, Moorgate Street, E.C.
1977	A. Jan. 1891 F. Nov. 1894	*POTTER, HERBERT GEORGE ..	28, Rosslyn Hill, Hampstead, N.W.
3884	A. Oct. 1901 F. Nov. 1907	*POTTIER, GEORGE LOUIS	Wannock, Downs Court Road, Purley Surrey.
2361	Nov. 1891	POTTS, JAMES	Estate Office, Workington, Cumberland.
224	Jan. 1870	POUNDLEY, JOHN EDWARD ..	Kerry, Newtown, Montgomeryshire.
2707	A. Oct. 1894 F. Oct. 1898	*POWELL, CHARLES REGINALD EVERNDEN	Bridge Chambers, Bideford, Devonshire.
1856	Nov. 1890	POWELL, FREDERICK ATKINSON, F.R.I.B.A.	344, Kennington Park Road, S.E., and Agincourt Square, Monmouth.
1022	A. Dec. 1883 F. Mar. 1891	POWELL, HUBERT JOHN	Hill Lodge, Lewes, Sussex.
342	A. Feb. 1874 F. Nov. 1880	POWELL, REGINALD HENRY ..	Estate Office, Lewes, Sussex.
2543	A. Nov. 1892 F. June 1896	*PRALL, HERBERT ALEXANDER ..	150, Eastgate, Rochester, and Martin Bank Chambers, Dartford, Kent.
1536	A. Dec. 1888 F. Dec. 1892	*PRESTON, SAMUEL DAVID	Town Hall, Camberwell, S.E.
1781	Apr. 1890	PRICE, FRANCIS HOLBORROW GLYNN	7, Picton Place, Swansea, Glamorgans shire.
5520	A. Oct. 1908 F. June 1911	*PRICE, FREDERICK PALEY	Crescent Lodge, The Crescent, Surbiton Surrey.
2544	A. Nov. 1892 F. Nov. 1895	*PRICE, RICHARD ARNOLD	c/o Price, Arrow and Taylor, 11, Queen Victoria Street, E.C.
4500	A. Oct. 1904 F. May 1909	*PRICKARD, THOMAS FRANCIS VAUGHAN	171, Victoria Street, S.W.
2107	May 1891	PRIDMORE, ALBERT EDWARD ..	2, Broad Street Buildings, E.C.
1857	Nov. 1890	PRIDMORE, ARTHUR STIRLING ..	140, Junction Road, N.
4055	A. Oct. 1902 F. Nov. 1908	*†SPRITCHARD, HENRY A.	Royal Agricultural College, Cirencester, and St. Fagan's, Cardiff.

† Special Sanitary Science Certificate.

‡ Special Forestry Certificate.

Date of Election and of Transfer.	FELLOWS.	Address.
A. Oct. 1894	*PRITCHARD, HERBERT ALFRED	43, St. John's Road, Putney, S.W.
F. Mar. 1899	*PROTHEROE, ALFRED ERNEST ..	67 and 68, Cheapside, E.C.
F. Dec. 1903	*PUDDICOMBE, WILLIAM PHIPPEN	Council Offices, Mumbles, near Swansea.
A. Oct. 1903	*PUGH-JONES, DAVID	6, Kimberley Road, Roath Park, Cardiff, Glamorganshire.
F. Oct. 1910	*PUNCHARD, FREDERICK BURT ..	Fairbank, Kirkby Lonsdale, Westmorland.
A. Oct. 1894	PURCELL, WILLS W.	Dromore, Mallow, Co. Cork.
F. Oct. 1900	PURCHASE, EDWARD KEYNES ..	20 and 22, Maddox Street, Regent Street, W.
A. Jan. 1890	PURDIE, ANTHONY	241, West George Street, Glasgow.
F. Feb. 1895	PURVES, JAMES.. .. .	Dunskey Estate Office, Portpatrick, N.B.
Sep. 1895	*PURVIS, CHARLES JAMES	Deptford Bridge, S.E.
A. Jan. 1884	*PYLE, BENJAMIN THOMAS RICE..	Haskins, Sawbridgeworth, Herts.
F. Jan. 1879		
Feb. 1898		
Oct. 1908		
A. Oct. 1895		
F. Jan. 1897		
A. Oct. 1896		
F. Sep. 1903		
5 Sep. 1895	QUIN, RICHARD	Highbury House, Woodland, Falmouth.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
3066	Oct. 1896	RAVES, BERTRAM ADAMS, MAJOR, A.M.I.C.E.	Royal Engineer Office, Salisbury.
902	Feb. 1883	RAWLENCE, ERNEST ALFRED	Newlands, Salisbury.
3886	A. Oct. 1901 F. May 1910	*RAWLENCE, JAMES	Estate Office, Wimborne, Dorsetshire.
2026	Mar. 1891	RAWLENCE, JAMES EDWARD	The Canal, Salisbury.
1859	Nov. 1890	RAWLINS, HENRY ADAIR, A.R.I.B.A.	46, Queen Victoria Street, E.C.
2367	Nov. 1891	RAWLINS, WILLIAM	45, King William Street, E.C.
134	Oct. 1868	RAYNBIRD, HUGH EDWARD	Basingstoke, Hants.
1516	Dec. 1888	REA, JOHN MARCUS BEAUMONT	8, Winckley Street, Preston, and Lytham Lancashire.
4242	A. Oct. 1903 F. June 1908	*READ, FRANCIS CHARLES JEN- NINGS	City Surveyor's Office, Guildhall, E.C.
2709	A. Oct. 1894 F. Sep. 1906	*READ, WALTER HERBERT	81, Argyle Road, Ealing, W.
2109	May 1891	REBBECK, EDWARD WISE	Stafford Lodge, Bournemouth, Hants.
2368	Nov. 1891	REBBECK, THOMAS WARREN	Gervis Place, Bournemouth, Hants.
3418	A. Oct. 1898 F. Feb. 1907	*REED, RICHARD GEORGE GORDON	27, Chancery Lane, W.C.
1860	Nov. 1890	REES, ITHEL TREHARNE, M.I.C.E.	Guildhall Chambers, Cardiff, Glamorgan shire.
584	Dec. 1889	REES, WILLIAM ANDREW	154, Croydon Road, Anerley, S.E.
541	Apr. 1879	REES, WILLIAM GEORGE	Holly House, Newport, Monmouthshire
2369	Nov. 1891	REES, WILLIAM JOHN	The Laurels, Swansea, Glamorganshire
2370	Nov. 1891	REEVE, KINGSNORTH	27, High Street, Rye, Sussex, and High Street, Lydd, Kent.
3121	A. Oct. 1896 F. Oct. 1897	*REFFELL, CHARLES ARTHUR	Thorney, Ennismore Avenue, Guildford
4885	Oct. 1906	REMANT, ARCHIBALD CHARLES	H.M. Office of Works, S.W., and 185 Croydon Road, Anerley, S.E.
937	Apr. 1883	RENDELL, ARTHUR STEPHEN	Market Terrace, Newton Abbot, Devon
3071	Oct. 1896	*RENTON, GEORGE	3, Princes Square, Harrogate, Yorkshire
5374	Oct. 1908	RENTON, JAMES	Sunbank, Perth.
802	A. Apr. 1882 F. Jan. 1890	REX, FRANCIS HERBERT	311, Kentish Town Road, N.W.
453	A. May 1876 F. Dec. 1881	RICH, ROBERT	Didcot, Berks.
2027	Mar. 1891	RICHARDS, GEORGE EDWARD	Stour Lodge, Wimborne, Dorset.
5121	A. Oct. 1906 F. Oct. 1909	*RICHARDS, WALTER	12, Swan Hill, Shrewsbury.
5255	A. Oct. 1907 F. Oct. 1909	*RICHARDS, WALTER ROWE	35, Wontner Road, Balham, S.W.
3122	A. Oct. 1896 F. Apr. 1901	*RICHARDSON, ARTHUR BAYLIFFE	74, Cheapside, E.C.
1955	Jan. 1891	RICHARDSON, CHARLES	15, Barn Hill, Stamford, Lincolnshire.
1746	Feb. 1890	RICHARDSON, GEORGE	5, Lonsdale Street, Carlisle.
1817	Mar. 1890	RICHARDSON, JAMES	13, Barn Hill, Stamford, Lincolnshire.
2466	A. Nov. 1891 F. May 1892	*RICHARDSON, OLIVER ARCHER	Sun Fire Office, Threadneedle St., E.C.
303	Feb. 1873	RICKMAN, THOMAS MILLER, A.R.I.B.A. (<i>Past-President</i>)	64, Philbeach Gardens, Earl's Court, S.W.

Date of Election and of Transfer.	FELLOWS.	Address.
Nov. 1891	RIDDETT, WILLIAM HAMMOND ..	Townhall Chambers, Ryde, Isle of Wight.
Apr. 1883	RIDDLE, FREDERICK HENRY BRIMBLE	26, Notting Hill Gate, W.
A. Oct. 1899 F. June 1900	*RIDLEY, PERCY EDWARD ..	Fire Offices Committee, 65 & 66, Watling Street, E.C.
Mar. 1891	RIGDEN, FRANCIS	Salisbury.
Dec. 1888	RIGHTON, EDWARD GRANTHAM ..	High Street, Evesham, Worcestershire.
Oct. 1904	*RIMMER, JOHN STANISLAUS ..	48, Castle Street, Liverpool.
A. Oct. 1902 F. Dec. 1910	*RIPPENGAL, ARTHUR HENRY ..	Brentwood, Essex.
Feb. 1899	ROBB, WILLIAM JOHNSTON ..	53, Bothwell Street, Glasgow.
A. Jan. 1876 F. Nov. 1890	ROBERTS, CHARLES QUINCEY ..	61, Lincoln's Inn Fields, W.C.
Sep. 1895	ROBERTS, EDWARD USSHER ..	Gaultier, Woodstown, Waterford.
A. Oct. 1900 F. Oct. 1910	*ROBERTS, JOHN, N.D.A. ..	Perfeddnant, Towyn, Merionethshire.
Oct. 1900	ROBERTS, SAMUEL	Royal Engineer Office, 14, Elliot Street, Liverpool.
A. Oct. 1905 F. Apr. 1911	*ROBERTSON, CLEMENT ALBERT ..	75, Chancery Lane, W.C.
Feb. 1908	ROBERTSON, JOHN	Panmure Estate Office, Carnoustie, Forfarshire.
A. Feb. 1882 F. May 1891	ROBEY, ROBERT	Oaklands, East Tytherley, Romsey, Hants
A. Feb. 1892 F. Nov. 1895	*ROBINS, PHILIP SEYMOUR ..	5, Waterloo Place, Pall Mall, S.W.
May 1891	ROBINSON, EDMUND ARTHUR ..	Lee-on-the-Solent, Gosport, Hants.
Nov. 1891	ROBINSON, GEORGE EDWARD ..	7, Tacketts Street, Blackburn, Lancashire.
Apr. 1881	ROBINSON, HENRY, PROFESSOR, M.I.C.E.	Parliament Mansions, Victoria Street, S.W.
Sep. 1895	ROBINSON, HENRY ARTHUR ..	Roundstone, Galway.
A. Nov. 1891 F. Oct. 1894	*ROBINSON, HENRY HERBERT ..	8, New Court, Carey Street, W.C.
Sep. 1895	ROBINSON, RICHARD ST. GEORGE	Seamount, Sligo, Ireland.
A. Oct. 1897 F. Oct. 1898	*ROBINSON, THEODORE RICHARD	25, Campden Hill Gardens, Kensington, W
Dec. 1872	ROBSON, EDWARD ROBERT, F.R.I.B.A.	Palace Chambers, 9, Bridge Street, S.W., and 2, The Paragon, Blackheath, S.E.
Sep. 1895	ROCHFORD, WILLIAM	Cahir Abbey, Cahir, Co. Tipperary.
Feb. 1904	*RODDICK, ANDREW	4, Adelphi Terrace, Strand, W.C.
Feb. 1888	RODERICK, JOHN	2, Temple Row West, Birmingham.
Feb. 1890	RODHAM, JOHN	16, Finkle Street, Stockton-on-Tees, Durham.
Sep. 1895	ROE, WILLIAM JAMES, B.A. (<i>Dublin</i>)	1, Upper Ely Place, Dublin.
A. Oct. 1903 F. Oct. 1910	*ROGERS, FREDERIC JAMES ..	68, Lincoln's Inn Fields, W.C.
Sep. 1895	ROGERS, HARRY	The Hill, Monaghan, Ireland.
A. Oct. 1896 F. June 1897	*ROGERS, HORACE MORDAUNT ..	50, Belgrave Road, South Belgravia, S.W.

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4512	A. Oct. 1904 F. Jan. 1909	*ROGERS, LEONARD NEVILLE ..	50, Belgrave Road, S.W.
361	A. Dec. 1874 F. Jan. 1876	ROLLESTON, SIR JOHN FOWKE LANCELOT, M.P. (Past-President)	5, Waterloo Place, S.W., and Grey Friars Leicester.
969	A. May 1883 F. Jan. 1889	*\$ROLLESTON, WILLIAM GUSTAVUS STANHOPE	Grey Friars, Leicester.
1344	A. Dec. 1886 F. Nov. 1887	*\$ROODS, ALFRED	8, New Court, Lincoln's Inn, W.C.
3126	A. Oct. 1896 F. May 1900	*\$ROOK, JOSEPH TAYLOR	23, Spencer Street, Carlisle.
2376	Nov. 1891	ROONEY, SAMUEL	Cefn Mably Chambers, 9, Quay Street, Cardiff.
4515	A. Oct. 1904 F. Oct. 1910	*ROSS, PERCY HAVERY	Valuers' Department, Somerset House, W.C.
3335	Oct. 1895	*ROWLAND, JOSEPH SAMUEL ..	19, Station Street, Burton-on-Trent, Staffs.
3586	A. Oct. 1899 F. Nov. 1904	*ROWLANDSON, SAMUEL MESSITER, CAPTAIN	The College, Durham.
2114	May 1891	ROYCE, DAVID NEEDHAM	Oakham, Rutland.
2115	May 1891	ROYCE, JOHN	Oakham, Rutland.
2029	A. Oct. 1900 F. Nov. 1904	RUAAULT, JOHN GUSTAVE PETER	17, Southampton St., Bloomsbury, W.C.
3730	A. Oct. 1900 F. Nov. 1904	*RUDDLE, FREDERICK CHARLES ..	Rates Department, Treasury, S.W.
2378	Nov. 1891	RUMBALL, AUBREY	St. Albans, Herts.
970	A. May 1883 F. Jan. 1890	*RUNDLE, EDWARD COLLINS ..	Bedford Office, Tavistock, Devon.
1023	A. Dec. 1883 F. Feb. 1889	RÜNTZ, ERNEST AUGUSTUS ..	64, Victoria Street, Westminster, S.W.
315	A. Dec. 1873 F. Nov. 1875	RUSHWORTH, EDMUND WALTER	22, Savile Row, W.
1547	Jan. 1889	RUTHERFORD, JAMES AUGUSTINE	Estate Office, Highclere Park, Newbury.
998	Dec. 1883	RUTLEY, CHARLES	11, Dowgate Hill, E.C.
1818	May 1890	RUTLEY, FRANK	11, Dowgate Hill, E.C.
2866	Sep. 1895	RUTTLEDGE, FRANCIS	Cliff House, Enniscorthy, Co. Wexford.
4337	Oct. 1904	RUTTLEDGE, THOMAS F.	Rossmally, Westport, Co. Mayo.
2867	Sep. 1895	RUTTLEDGE, THOMAS HENRY BRUEN	42, North Great George Street, Dublin.
2350	Nov. 1891	RYAN, WILLIAM PATRICK	1, Metal Exchange Buildings, Whitting- ton Avenue, Leadenhall Street, E.C.
466	A. Dec. 1876 F. Nov. 1880	RYDE, ARTHUR LYON (Member of Council)	49 and 50, Parliament Street, S.W.

Date of Election and of Transfer.	FELLOWS.	Address.
1. A. Dec. 1883 F. Feb. 1910	SABIN, JOSEPH HENRY	7, Little College Street, Westminster Abbey, S.W.
3. A. Dec. 1884 F. May 1894	*SADLER, GEORGE WILLIAM, A.R.I.B.A.	Duchy of Lancaster Office, Lancaster Place, W.C.
6. Feb. 1871	ST. QUINTIN, PERRY	50, Threadneedle Street, E.C.
8. A. Mar. 1876 F. Nov. 1889	ST. QUINTIN, RICHARD SAMUEL ..	50, Threadneedle Street, E.C.
8. Dec. 1888	SALTER, WILLIAM HERBERT ..	The Hall, Attleborough, Norfolk.
8. Apr. 1890	SAMPLE, CHAS. HERBERT, B.A. (Cantab.)	Matfen, near Newcastle-on-Tyne, Northumberland.
9. Apr. 1890	SAMPLE, WILLIAM COLLINGS ..	Tritlington Hall, Morpeth, Northumberland.
32. A. Dec. 1889 F. Oct. 1891	SAMPSON, WILLIAM	Beauchief Abbey, near Sheffield.
34. Mar. 1887	SAMUEL, WILLIAM JOHN	42, Mill Street, Bedford.
16. May 1891	SANCTUARY, CAMPBELL FORTESCUE STAPLETON	Mangerton, Melplash, Dorset.
39. A. Oct. 1899 F. Oct. 1909	*SANDELL, STANLEY LUNAU ..	816, High Road, Tottenham, N.
33. A. Oct. 1902 F. Nov. 1903	*SANDERS, INGALTON	23, Portland Street, Southampton.
68. Sep. 1895	SANDERS, ROBERT MASSY DAWSON	Sanders Park, Charleville, Co. Cork.
3. Oct. 1910	*SANDERSON, WILLIAM WAITE ..	Kenton Hall, Kenton, Northumberland
87. A. Oct. 1895 F. Mar. 1899	*SANDFORD, CHARLES SIDNEY ..	16, St. James Row, Sheffield.
22. A. Oct. 1904 F. Apr. 1911	*SAUNDERS, ARTHUR PERCIVAL ..	Messrs. Collins & Collins, 37, South Audley Street, W.
96. A. Jan. 1890 F. Nov. 1892	*SAUNDERS, CHARLES HERBERT ..	150, Finchley Road, Hampstead, N.W.
82. Nov. 1891	SAUNDERS, MARTIN L., A.R.I.B.A.	4, Coleman Street, E.C.
47. A. Apr. 1884 F. Oct. 1899	*SAUNDERS, SAMUEL BROWN ..	Estate Offices, L. and S.W. Ry., Waterloo Station, S.E.
83. Nov. 1891	SAUNDERS, THEODORE RIDLEY, A.M.I.C.E.	Belgrave Chambers, Ventnor, Isle of Wight.
82. A. Mar. 1882 F. Mar. 1889	SAVILL, ALFRED	24, Great Winchester Street, E.C.
02. A. Nov. 1890 F. Aug. 1893	*SAVILL, EDWIN	24, Great Winchester Street, E.C.
89. A. Feb. 1905 F. July 1907	*SAVILL, HENRY NORMAN	24, Great Winchester Street, E.C.
11. A. Oct. 1894 F. June 1904	*S ⁺ SAWYER, JOHN ASHTON	59, High Street, Winchester.
06. Feb. 1898	SAYER, GEORGE WILLIAM, CAPT.	Royal Engineer Office, Pembroke Dock, South Wales.
304. Oct. 1909	SCLATER, EDWARD	Boyne Hill, Hillsborough, Co. Down.
713. A. Oct. 1894 F. Oct. 1899	*SCOTT, ARCHIBALD LACY	Long Melford, Suffolk.
255. A. Oct. 1903 F. May 1910	*SCOTT, JOHN	5, Market Place, Morpeth, Northumberland.
70. Sep. 1895	SCOTT, JOHN RUSSELL	5, Haddon Terrace, Clontarf, Dublin.
321. Feb. 1900	*SCOTT-SMITH, ARTHUR COURTNEY	16, Gandy Street, Exeter.

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755	A. Feb. 1882 F. Mar. 1889	SCRIVEN, CHARLES HERBERT ..	Agency Office, Thong, Gravesend, Kent.
1861	Nov. 1890	SCRIVEN, RICHARD GEORGE ..	Castle Ashby, Northampton.
2647	Oct. 1894	*SCRUBY, WILLIAM THOMAS ..	Post Office Terrace, Cambridge.
3129	A. Oct. 1896 F. Oct. 1899	*SECKER, JOHN EUSTACE ..	Estate Office, Warrington, Lancashire.
3259	A. Oct. 1897 F. May 1900	*SEDGWICK, ALFRED SYDNEY EDWARD	31, Warwick Street, Worthing, Sussex.
3260	A. Oct. 1897 F. Jan. 1902	*SEEL, ROBERT HAROLD ..	Theatre Royal Chambers, Cardiff, Glamorganshire.
1863	Nov. 1890	SENIOR, HARRY SAMUEL ..	Sturminster Newton, Dorset.
3130	A. Oct. 1896 F. June 1897	*SEXTON, GEORGE ALEXANDER ..	Bank Chambers, 42, High Road, Kilburn, N.W.
1049	A. Jan. 1884 F. Mar. 1891	SHACKLE, EDWARD NEILD ..	14, Mount Street, Grosvenor Square, W.
3301	Feb. 1898	SHARP, JOHN GRANT ..	172, Buchanan Street, Glasgow.
3261	A. Oct. 1897 F. Oct. 1898	*SHEARBURN, HARRY, B.A. (<i>Can- tab.</i>)	Munstead, Godalming, Surrey.
1819	May 1890	SHELMERDINE, HENRY ..	Estate Offices, Lancashire and Yorkshire Railway, Hunt's Bank, Manchester.
1316	May 1886	SHERWIN, JOHN LESTER ..	Iona, Eastbourne, Sussex.
706	A. Jan. 1882 F. Dec. 1887	SHERWIN, JOSEPH HENRY ..	7, Little College Street, Westminster, S.W.
2385	Nov. 1891	SHONE, ISAAC, A.M.I.C.E. ..	47, Victoria Street, Westminster, S.W.
474	A. Jan. 1877 F. Nov. 1880	SHOPPEE, CHARLES HERBERT, F.R.I.B.A.	22, John Street, Bedford Row, W.C.
4121	Oct. 1903	SHORT, ERNEST WILLIAM GEORGE	Royal Engineer Office, "C" Lines, Bulford Camp, Salisbury.
2988	A. Oct. 1895 F. June 1900	*SHUFFLEBOTHAM, JOHN HENRY ..	Staplegrove, Taunton, Somerset.
4126	Oct. 1903	*SILCOCK, EDWARD JOHN, M.I.C.E.	Sanctuary House, Tothill Street, West- minster, S.W., and 10, Park Row, Leeds.
604	A. Jan. 1881 F. May 1883	*SILCOCK, THOMAS BALL, B.Sc. (<i>Lond.</i>)	47, Milsom Street, Bath.
4850	Feb. 1906	SILVESTER, GEORGE ..	10, Duke Street, Adelphi, W.C.
811	A. May 1882 F. Nov. 1889	SIMMONS, CHARLES FRANKLIN ..	Basingstoke, Hants, and Henley-on- Thames, Oxfordshire.
824	A. Nov. 1882 F. Aug. 1891	SIMMONS, W. ANKER ..	Henley-on-Thames, Oxfordshire, and Basingstoke, Hants.
5820	Feb. 1910	SIMPSON, CECIL JOHN WILLIAM ..	Office of Works, Shanghai, China.
1486	May 1888	SIMPSON, ROBERT THOMAS ..	Horsecroft, Bury St. Edmunds, Suffolk.
2386	Nov. 1891	SINGLE, ARTHUR ..	83, The Grove, Stratford, E.
2546	A. Nov. 1892 F. May 1897	*SKIPPER, HENRY HERBERT ..	48, Collingwood Avenue, Muswell Hill, N.
2387	Nov. 1891	SKITT, ARTHUR ..	9, St. Saviour's Road, Brixton Hill, S.W.
3052	A. June 1896 F. Oct. 1899	*SKRIMSHIRE, SAMUEL ..	16, Green Street, Charing Cross, S.W.
3425	A. Oct. 1898 F. Feb. 1901	*SKUES, CHARLES AYRE MAC- KENZIE	Ye Haven, Hockering Road, Woking, Surrey.
2388	Nov. 1891	SLADE, JAMES BENJAMIN ..	67 and 68, Cheapside, E.C.

p. o.	Date of Election and of Transfer.	FELLOWS.	Address.
58	A. Oct. 1903 F. Jan. 1910	*SLADDIN, FREDERICK ROBERT EDWIN	Union Castle Buildings, Adderley Street, Cape Town, B.S.A.
03	A. Nov. 1890 F. Nov. 1892	*SLATER, CHARLES FREDERICK ..	52 and 53, Cheapside, E.C., and Surrey.
22	Feb. 1910	*SLATER, ERIC ARNOLD	Town Hall, Colchester, Essex.
38	A. Feb. 1894 F. Feb. 1900	*SLY, JOSEPH TOWNSON	Estate Agency Offices, Rickmansworth, Herts.
31	A. Oct. 1896 F. Oct. 1900	*SLY, WILLIAM	Estate Office, Somerset House, Whitehaven, Cumberland.
31	A. Oct. 1906 F. Apr. 1911	*SMALLMAN, HENRY RICHARD GEORGE STRONG	8, Queen Street, Cheapside, E.C.
69	A. Oct. 1902 F. Jan. 1908	*SMITH, ARTHUR TELFORD	15, Cheapside, Bradford, Yorkshire.
39	A. Oct. 1895 F. Oct. 1900	*SMITH, CHARLES GORDON	56, Cannon Street, E.C., and 33, West Bank, Stamford Hill, N.
71	A. Oct. 1902 F. May 1906	*†SMITH, CYRIL HERBERT	Chippenham, Wiltshire.
26	May 1889	SMITH, EDWARD	54, Amwell Street, E.C.
54	Apr. 1888	SMITH, FRANK	104, Colmore Row, Birmingham.
39	Nov. 1891	SMITH, FRANK ADAMS, F.R.I.B.A.	35, New Broad Street, E.C.
06	A. Oct. 1893 F. July 1895	*SMITH, FRANK BRAYBROOKE ..	Coningsby, Furze Lane, Purley, Surrey.
38	A. Dec. 1888 F. Jan. 1890	*§SMITH, FRANK WILLIAM	Beauchamp Hill, Milverton, Leamington, Warwickshire.
00	Nov. 1891	SMITH, FREDERICK JOHN	21, Portland Street, Southampton.
34	Mar. 1891	SMITH, FREDERICK ROBERT	13, Victoria Street, Westminster, S.W.
35	Dec. 1889	SMITH, GEORGE	Boughton-Monchelsea, Kent.
19	May 1891	SMITH, GEORGE ALFRED	78, Parchment Street, Winchester.
71	Sep. 1895	SMITH, GEORGE YOUNG	Stradowan, Omagh, Co. Tyrone.
34	Nov. 1890	SMITH, HARRY RUSSELL	Exchange Buildings, Bradford, Yorkshire.
00	A. Apr. 1875 F. Jan. 1881	SMITH, HENRY HERBERT (Member of Council)	Bowood, Calne, Wiltshire.
02	A. Oct. 1899 F. Feb. 1904	*SMITH, JOHN AMBROSE	Estate Office, Tatton Park, Knutsford, Cheshire, and 34, John Dalton Street, Manchester.
7	May 1888	SMITH, JOHN THOMPSON	34, John Dalton Street, Manchester.
4	Oct. 1910	*SMITH, JONAH WALKER	Local Government Board, George Street, Edinburgh.
8	May 1891	SMITH, PERCY PYNE CALDECOTT	Director of Works Department, Admiralty, S.W.
14	A. Oct. 1901 F. Jan. 1907	*SMITH, QUENTIN CULLEN	Valuation Department, 7, Bishopsgate Street Without, E.C.
5	Oct. 1908	SMITH, ROBERT	Cranstoun, Riddell, Dalkeith.
0	May 1890	SMITH, SIDNEY	Southwater, Horsham, Sussex.
2	A. Oct. 1902 F. Jan. 1908	*SMITH, STANLEY ADDISON	Emerson Chambers, Blackett Street, Newcastle-on-Tyne.
5	A. Oct. 1897 F. Nov. 1900	*§SMITH, SYDNEY ARTHUR	22, Chancery Lane, W.C.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
5348	Feb. 1908	SMITH, THOMAS	The Castle, Maybole, Ayrshire.
894	A. Feb. 1883	SMITH, WHEATER	15, Cheapside, Bradford, Yorkshire.
	F. Feb. 1839		
1256	Feb. 1885	*SMITH, WILLIAM	Upper Farm, Abbot's Salford, Evesham Worcestershire.
1372	Feb. 1887	SMYTH-RICHARDS, GEORGE COB- LEY	Estate Office, Castle Hill, near South Molton, Devonshire.
1494	Nov. 1888	SNELLING, HENRY	19 & 20, Walbrook, E.C., & Sidecup, Ken
5279	A. Oct. 1907	*SOUTH, ARTHUR EDWARD .. .	1, Victoria Road, Darlington.
	F. Oct. 1910		
2991	A. Oct. 1895	*SOUTHORN, CHARLES HERBERT ..	38, The Parade, Leamington Spa
	F. Oct. 1900		Warwickshire.
2607	A. Oct. 1893	*SOWELS, WILLIAM CLOWES .. .	Little Everdon, Daventry, North
	F. Nov. 1896		amptonshire.
4266	A. Oct. 1903	*SPARKE, NORMAN LUSH .. .	c.o. Shanghai Land Investment Com
	F. Apr. 1911		pany, 2, Jin Kee Road, Shanghai
			via Siberia.
4531	A. Oct. 1894	*SPENSLEY, JAMES CALVERT .. .	County Hall, Spring Gardens, S.W.
	F. Apr. 1911		
1822	May 1890	SQUAREY, NEWELL WILLIAM PITTS	Bemerton, Salisbury, and 15, Grew George Street, S.W.
1067	Jan. 1884	SQUIRE, RICHARD	2, Pont Street, Belgrave Square, S.W.
1277	Dec. 1885	STACEY, HARRIE	Station Road, Redhill, Surrey
2393	Nov. 1891	STALLARD, ALFRED EDWIN .. .	West Street, Havant, Hants.
2394	Nov. 1891	STALLARD, WILLIAM	St. John's House, St. John's, Worcester and Worcester Chambers, Worcester
2992	A. Oct. 1895	*STANDEN, ARTHUR CARNEGIE .. .	11, Southampton Row, High Holborn, W
	F. Mar. 1899		
2395	Nov. 1891	STANFORD, CHARLES MAURICE .. .	23, High Street, Colchester, Essex.
3269	A. Oct. 1897	*STANFORD, GEORGE	15, Great George Street, S.W., and 1
	F. July 1901		Blagrove Street, Reading.
2036	Mar. 1891	STANGER, SAMUEL ARTHUR .. .	21, Finsbury Pavement, E.C.
1437	Jan. 1888	STANLEY-DODGSON, STANLEY DICKINSON	Estate Office, Somerset House, Whit haven, Cumberland.
3431	A. Oct. 1898	*STANTON, FREDERICK WILLIAM SCHULTHEISS, A.M.I.C.E.	10, The Paddock, Chatham, and 3
	F. Nov. 1908		Victoria Street, Westminster, S.W.
5511	A. Oct. 1908	*STANTON, GEORGE WALTER .. .	2, College Road, Harrow-on-the-Hi
	F. June 1911		Middlesex.
2609	A. Oct. 1893	*STAPLEDON, ERNEST ALLEN .. .	Bridge Chambers, Bideford, North Dev
	F. Oct. 1894		
1707	Jan. 1890	START, JOSEPH WILLIAM	Cups Chambers, High Street, Colchester Essex.
469	Jan. 1877	STENNING, SIR ALEXANDER ROSE F.R.I.B.A. (<i>Past-President</i>) .. .	121, Cannon Street, E.C.
3898	A. Oct. 1901	*STEPHENS, JOHN KYLE	13, Donegall Square North, Belfast
	F. Jan. 1907		
4338	Oct. 1904	STEPHENS, SAMUEL	13, Donegall Square North, Belfast.
4339	Oct. 1904	STEPHENS, WILLIAM HENRY .. .	13, Donegall Square North, Belfast.
529	A. Jan. 1879	STEPHENSON, CHARLES WILLIAM	38, Parliament Street, S.W.
	F. Nov. 1882		

Date of Election and of Transfer	FELLOWS.	Address.
May 1890	STEVENS, CHARLES VIVIAN ..	56, Buckingham Gate, Victoria Street, Westminster, S.W.
Feb. 1906	STEVENS, JOHN JAMES	Broadway Court, Broadway, Westminster, S.W.
Nov. 1891	STEVENS, JOHN WM., A.R.I.B.A.	21, New Bridge Street, E.C.
Oct. 1897	STEVENSON, ALLAN	14, Cathcart Street, Ayr, N.B.
Mar. 1891	STEVENSON, EDMUND HERBERT, M.I.C.E.	38, Parliament Street, S.W.
A. Oct. 1903 F. Oct. 1910	*STEWART, CLIFFORD THOMAS ..	45, Parliament Street, S.W.
July 1868	STEWART, HERBERT THOMAS (<i>Past-President</i>)	45, Parliament Street, S.W.
Sep. 1895	STEWART, EDWARD P., CAPT. ..	4, Kildare Street, Dublin.
Sep. 1895	STEWART, GEORGE FRANCIS (<i>Member of Council</i>) ..	Summerhill, Killiney, Co. Dublin.
A. Oct. 1899 F. July 1901	*STEWART, GEORGE PAKENHAM..	21, Westland Row, Dublin.
A. Oct. 1900 F. July 1901	*STEWART, HENRY PAKENHAM ..	6, Leinster Street, Dublin.
Sep. 1895	STEWART, WILLIAM THOMAS ..	6, Leinster Street, Dublin.
Mar. 1891	STIRTON, THOMAS	Fernley House, Crescent Road, Ipswich, and Rendlesham Estate Office, Woodbridge, Suffolk.
May 1891	STOCKS, FREDERICK WILLIAM ..	Town Hall, Middlewich, Cheshire.
Sep. 1895	STOKES, RICHARD	60, Dawson Street, Dublin.
A. Oct. 1903 F. June 1910	*STONE, EDWARD ALBERT	4, Station Buildings, Catford Bridge, S.E.
A. Oct. 1897 F. July 1907	*STONEHAM, EDWARD RUSSELL..	Orchard House, Erith, Kent.
Dec. 1881	STONER, ALFRED	Boston House, 63 and 64, New Broad Street, E.C.
Mar. 1889	STOOKE, JAMES	Courtenay Street, Newton Abbot, Devon.
A. Oct. 1902 F. Jan. 1906	*†STOOKE, JOHN EDWIN HELLYAR	2, Palace Yard, Hereford.
June 1896	STOPFORD, THE HON. GEORGE FREDERICK WILLIAM	The Estate Office, Gorey, Co. Wexford.
Nov. 1891	STOPHER, THOMAS	Winchester.
A. Oct. 1904 F. Dec. 1910	*STRACHAN, CHARLES JOHN ..	62, Haverstock Hill, N.W.
A. Oct. 1895 F. June 1898	*STROUTS, LEWIS HERBERT..	137, Gleneldon Road, Streatham, S.W.
Feb. 1884	STRUDWICK, HAYWARD JAMES..	Falcon Court, 32, Fleet Street, E.C.
A. Dec. 1875 F. June 1891	STRUTT, THE HON. EDWARD GERALD (<i>Vice-President</i>)	Broad Street House, E.C., and Whitelands, Hatfield Peverel, Chelmsford.
Sep. 1895	STUDDERT, R. R. . . .	Hazlewood, Quin, Co. Clare.
May 1888	STUDDY, THOMAS EDWARD ..	Mazonel, Stoke Gabriel, Totnes, Devonshire.
July 1868	STURGE, ROBERT FOWLER..	33, Corn Street, Bristol.
Oct. 1901	*STURT, CHARLES EDWIN	16, St. Stephen's Gardens, East Twickenham, Middlesex.
Nov. 1891	SURRIDGE, JOSEPH SMITH ..	Coggeshall, Essex.

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3594	A. Oct. 1899 F. Mar. 1904	*SUTCLIFFE, JAMES HENRY	Sandy Gate, Hebden Bridge, Yorkshire
2401	Nov. 1891	SUTHERS, JAMES	Union Offices, Hull Street, Todmorden Yorks.
3432	A. Oct. 1898 F. Nov. 1900	*SUTTON, FREDERICK STANLEY ..	95, Cannon Street, E.C.
2402	Nov. 1891	SWAIN, ERNEST	26, High Street, Notting Hill Gate, W
2403	Nov. 1891	SWAIN, FRANK	170, High Street, Notting Hill Gate, W
1427	A. Dec. 1887 F. Feb. 1892	SWETENHAM, HENRY	49, North Gate Street, Chester.
2878	Sep. 1895	SWINEY, WILLIAM D.	Moyagh, Ramelton, Co. Donegal.
1257	Feb. 1885	SWORDER, HUGH	High Street, Epping, Essex.
4077	A. Oct. 1902 F. Apr. 1908	*SYMMONS, PERCY JAMES	7, Ivy Road, Cricklewood, N.W.
2879	Sep. 1895	SYNGE, EDWARD	Estate Office, 11, Leinster Street, Dublin
2880	Sep. 1895	TAILYOUR, ALEXANDER	Collycroft House, Ashbourne, Derbyshire
3302	Feb. 1898	TANNAHILL, ROBERT DUNLOP ..	Lands Valuation Office, Kilmarnock
1317	May 1886	TANNER, SIR HENRY, C.B., I.S.O., F.R.I.B.A.	H.M. Office of Works, Storey's Gate Westminster, S.W.
1115	A. Feb. 1884 F. Dec. 1888	TANNER, WILLIAM	County Surveyor, Newport, Monmouthshire.
771	A. Feb. 1882 F. Nov. 1889	TAPP, ARTHUR	5, Little George Street, Westminster S.W., and Southend-on-Sea, Essex.
2883	Sep. 1895	TATLOW, JOHN GARNETT	7, Belgrave Square West, Monkstown Co. Dublin.
2405	Nov. 1891	TAYLOR, ARTHUR WILLIAM ..	159, High Street, Putney, S.W.
3067	Oct. 1896	TAYLOR, EDGAR CHARLES, CAPT.	R.E. Office, Bermuda.
4079	A. Oct. 1902 F. Jan. 1911	*TAYLOR, EDWIN THURLOW ..	Valuer's Department, Market Square Lancaster.
5605	Oct. 1909	TAYLOR, GEORGE	Estate Office, Westport, Co. Mayo.
2548	A. Nov. 1892 F. Nov. 1895	*TAYLOR, HARRY WILLIAM, A.M.I.C.E.	Cathedral Buildings, Dean Street, Newcastle-on-Tyne.
2923	Sep. 1895	TAYLOR, J. GODFREY L.	Grangeville, Fethard, Co. Waterford.
1471	A. Mar. 1888 F. July 1891	TAYLOR, JOHN HERBERT	12, Hanover Square, W., and Turners Hill, Sussex.
4276	A. Oct. 1903 F. Oct. 1910	*TAYLOR, JOHN JAMES	11, Little College Street, Westminster S.W.
678	A. Dec. 1881 F. Feb. 1887	TAYLOR, JOHN WALTON, F.R.I.B.A.	St. John Street, Grainger Street West Newcastle-on-Tyne.
1026	A. Dec. 1883 F. Nov. 1889	TAYLOR, MATTHEW	Chiddingfold, Godalming, Surrey (Sussex Committee)
1825	May 1890	TAYLOR, RICHARD FREDERICK ..	3, King Street, Cheapside, E.C.

lp. o. Date of Election and of Transfer.	FELLOWS.	Address.
7 Nov. 1891	TAYLOR, THOMAS WALTERS ..	25, Brazennose Street, Manchester.
6 Oct. 1899	*TAYLOR, THOS. WILLIAM HARRIS	Estates Office, Killerton, Exeter.
0 A. Oct. 1900 F. Oct. 1910	*TAYLOR, WILLIAM HENRY.. ..	Nuttall, Nottingham.
9 A. Feb. 1894 F. Oct. 1894	*TEE, SAMUEL CLIFFORD	50, Moorgate Street, E.C.
9 A. Nov. 1891 F. Oct. 1894	*TEMPLE, FREDERICK WILSON ..	57, Sandgate Road, Folkestone, Kent.
5 Sep. 1895	TENER, EDWARD SHAW	The Square, Loughrea, Co. Galway.
6 A. Oct. 1901 F. May 1910	*TERRY, ARTHUR ELLIOTT	The Firs, Compton, Wolverhampton, Staffs.
0 A. Oct. 1902 F. May 1909	*TERRY, ERNEST FAIRCHILD ..	Clavadel, Brighton Road, Surbiton, Surrey.
0 A. Oct. 1893 F. Oct. 1898	*THEAKSTON, WILLIAM PEASE ..	Huntingdon.
4 Apr. 1883	THEOBALD, HENRY WELLS DEW- HURST (<i>Member of Council</i>) ..	110, Great Russell Street, W.C.
3 A. June 1896 F. June 1898	*THEOBALD, JOHN MEDOWS.. ..	110, Great Russell Street, W.C.
0 A. Oct. 1907 F. Nov. 1909	*THIRLAWAY, ROBERT	Arrocha, Mousehole Lane, Shirley, South- ampton.
1 A. Oct. 1898 F. Jan. 1901	*THOMAS, CHARLES JOHN HOWELL	Inland Revenue, Somerset House, W.C.
3 A. Oct. 1899 F. Nov. 1909	*THOMAS, GEORGE WILLIAM ..	13, St. Andrew's Crescent, Cardiff.
5 Mar. 1890	THOMAS, GLEGGE	Cheshire Lines Committee, Central Station, Liverpool.
9 A. Oct. 1894 F. July 1901	*THOMAS, ILLTYD	17, Quay Street, Cardiff, Glamorganshire.
Dec. 1882	THOMPSON, ARTHUR EDMUND ..	Leadenhall Buildings, E.C.
Nov. 1891	THOMPSON, FRANCIS WILLIAM	Ash Lawn, Heaton, Bolton, Lancashire
6 Oct. 1900	THOMPSON, SIR ROBERT JAMES (<i>Member of Council</i>)	Inland Revenue, Somerset House, W.C.
A. Oct. 1904 F. Oct. 1910	*THOMSON, JOHN LORIMER.. ..	Valuer's Department, 31, Albert Square, Dundee.
Mar. 1888	THORNE, ARNOLD, F.R.I.B.A. ..	Barnstaple, Devon.
A. Feb. 1904 F. May 1910	*THORNTON, ARTHUR BRUCE ..	18, Holwood Road, Bromley, Kent.
Oct. 1902	*THORP, ROBERT HAYTON	Land of Green Ginger, Hull.
A. Feb. 1882 F. Nov. 1889	THORPE, CHRISTOPHER	56, St. Helen's Street, Chesterfield, Derby- shire.
May 1891	THORPE, JOHN	Market Bosworth, Leicestershire.
A. Oct. 1894 F. July 1895	*THRING, DOUGLAS THEODORE ..	Boughton House, near Kettering, North- amptonshire.
A. Feb. 1892 F. Nov. 1900	*THURGOOD, ALBERT EDWARD ..	1, Bury Street, Guildford.
A. Dec. 1886	THURNALL, JOHN EDWARD ..	Royston, Herts.
F. Nov. 1887	*THWAITES, GEORGE PERCY ..	8 and 9, Essex Street, Strand, W.C.
A. Oct. 1904 F. Apr. 1908 Jan. 1884	THYNNE, GUY HARRY.. ..	9, Victoria Street, S.W.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
1373	Feb. 1887	TINDALL, CHARLES WILLIAM ..	Wainfleet, S.O., Lincolnshire.
4517	A. Oct. 1901 F. Apr. 1911	*TITFORD, HORACE JAMES... ..	Messrs. Waterer and Dickins, 13 High Street, Bromley, Kent.
2413	Nov. 1891	TODD, RICHARD	Englefield, near Reading.
1241	Jan. 1885	TODD, WILLIAM HENRY, M.I.C.E.	County Buildings, Hull.
1438	Jan. 1888	TOMLINSON, THOMAS H. . . .	2, St. James's Street, Derby.
1600	Mar. 1889	TOMPSETT, WILLIAM ROBERT ..	Meadhurst, Tonbridge, and Stone Castle Farm, Paddock Wood, Kent.
473	Jan. 1877	TOOTELL, RICHARD WILLIAM ..	11, Queen Victoria Street, E.C.
2550	A. Nov. 1892 F. Feb. 1896	*TORY, JOHN EDWARD.. . . .	Inland Revenue, 50, Queen Street, Exeter.
447	Apr. 1876	TOWER, BROWNLOW RICHARD CHRISTOPHER	Bridgewater Estate Office, Ellesmere, Salop.
2763	A. Mar. 1895 F. Oct. 1898	*TOWNEND, WILLIAM	4, Mosley Street, Newcastle-on-Tyne.
2890	Sep. 1895	TOWNSHEND, CHARLES LOFTUS..	15, Molesworth Street, Dublin.
2892	Sep. 1895	TOWNSHEND, JAMES RICHARD CLARKE	23, South Frederick Street, Dublin.
2894	Sep. 1895	TOWNSHEND, THOMAS COURTNEY	23, South Frederick Street, Dublin.
2893	Sep. 1895	TOWNSHEND, THOMAS LOFTUS ..	15, Molesworth Street, Dublin.
2414	Nov. 1891	TRAFFORD, FREDERICK CHARLES	100, Jermyn Street, St. James's, S.W.
3276	A. Oct. 1897 F. May 1903	*TREHEARNE, ALFRED FREDERICK ALDRIDGE	45, Lincoln's Inn Fields, W.C.
3436	A. Oct. 1898 F. Apr. 1904	*TREMLETT, WALTER WILLIAM ..	Ansley Hall Estate Office, Hartshill Atherstone, Warwickshire.
2895	Sep. 1895	TRENCH, ARTHUR	Burleigh, Burlington Road, Dublin.
3437	A. Oct. 1898 F. Nov. 1901	*TRENT, WILLIAM EDWARD.. . .	6, Broad Street Place, E.C.
2415	Nov. 1891	TREPPLIN, ERNEST C.	Stoke Court, Taunton, Somersetshire.
4852	Feb. 1906	TROLLOPE, CHARLES GEORGE N.	20, Tothill Street, Westminster, S.W.
592	A. Dec. 1880 F. Jan. 1891	TROLLOPE, HENRY CHARLES ..	7, Hobart Place, S.W.
1131	A. Mar. 1884 F. Aug. 1891	TRUMPER, JOHN ALFRED	27, Lincoln's Inn Fields, W.C.
2040	Mar. 1891	TUBBS, WALTER BURNELL.. . .	37, Barbican, E.C.
2470	A. Nov. 1891 F. Jan. 1896	*TUCKETT, PERCIVAL FOX	2, Basinghall Street, E.C.
2416	Nov. 1891	TURNER, ALEXANDER HENRY ..	69, South Audley Street, Grosvenor Square, W.
4818	A. Oct. 1905 F. Apr. 1911	*TURNER, BENJAMIN GEORGE ..	Church House, Walmer, Kent.
1495	Nov. 1888	TURNER, CHARLES	Oakhurst, East Grinstead, Sussex.
2900	Sep. 1895	TURNER, FREDERICK ADOLPHUS BRABAZON.. . . .	The Estate Office, Gorey, Co. Wexford
1866	Nov. 1890	TURNER, JOSEPH HARLING ..	Portland Estate Offices, Kilmarnock.

Date of Election and of Transfer.	FELLOWS.	Address.
Dec. 1888	TURNER, THOMAS WARNER ..	Langwith Lodge, Mansfield, Notts.
Nov. 1890	TURTON, EDWARD JAMES ..	Horkstow, Barton-on-Humber, Lincolnshire.
Oct. 1904	TURTON, FLETCHER THOMAS ..	Municipal Offices, Surveyor's Department, Liverpool.
Oct. 1898	*TUTT, EDWIN THOMAS ..	Market Place, Ampthill, Beds.
A. Jan. 1890	*TYLER, JAMES WILLIAM ..	45, Holborn Viaduct, E.C.
F. Aug. 1893	TYNDALL, ALBERT HENRY ..	Ballyanne House, New Ross, Co. Wexford
Sep. 1895	*TYPE, MARCUS OSWALD ..	87, Edmund Street, Birmingham.
A. Oct. 1899	TYRRELL, GARRETT CHARLES,	
F. Dec. 1905	M.A. (<i>Dublin</i>)	Ballinderry, Carbery, Co. Kildare.
Sep. 1895		
A. Oct. 1900	*UPSDALE, ANDREW REED ..	738, Romford Road, Manor Park, E.
F. July 1901		
Feb. 1883	VAIZEY, JOHN GEORGE ..	Bocking, Braintree, Essex, and 44, Bedford Row, W.C.
A. Feb. 1889	*VALE, HENRY	16, Darlington Street, Wolverhampton, Staffs.
F. June 1910		
Sep. 1895	VANDELEUR, CECIL ERNEST ..	Windgate House, Greystones, Co. Wicklow
A. Oct. 1903	*VEALE, LOUIS CHARLES ..	72, Finsbury Pavement, E.C.
F. Apr. 1911	*VERNON, ARTHUR	Borshams, High Wycombe, Bucks., and
Feb. 1876	(<i>Past-President</i>)	11, Queen Victoria Street, E.C.
Sep. 1895	VERNON, ARTHUR POMEROY ..	1, Wilton Place, Dublin.
A. Oct. 1905	*VERNON, ARTHUR STANLEY ..	41, High Street, High Wycombe, Bucks, and 11, Queen Victoria Street, E.C.
F. June 1906		

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2906	Sep. 1895	VERNON, FANE	Pembroke Estate Office, Wilton Place, Dublin.
2289	Nov. 1891	†VERNON-INKPEN, GEORGE CHAS.	40, Commercial Road, Portsmouth.
2907	Sep. 1895	VERSCOYLE, WILLIAM HENRY FOSTER	Woodley, Dundrum, Co. Dublin.
4084	A. Oct. 1902 F. Nov. 1903	*VICKERS, ALFRED CRANSTOUN ..	52, Boston Avenue, Southend-on-Sea, Essex.
4285	A. Oct. 1903 F. June 1910	*VIGERS, ASTLEY ALLAN	4, Frederick's Place, E.C.
498	A. Jan. 1878 F. Oct. 1883	VIGERS, LESLIE ROBERT (<i>Past-President</i>)	4, Frederick's Place, E.C.
594	A. Dec. 1880 F. Nov. 1885	VIGERS, MARTIN	52, Queen Victoria Street, E.C.
46	June 1868	VIGERS, ROBERT (<i>Past-President</i>)	Wellesley House, Sloane Square, S.W.
1496	Nov. 1888	VILLAR, JAMES	2, Essex Place, Cheltenham, Gloucestershire.
2994	A. Oct. 1895 F. Dec. 1898	*VINTEN, HAROLD BERTRAM ..	72, High Street, Ramsgate, Kent.
1601	Mar. 1889	WACHER, THOMAS	Upper Bridge Street, Canterbury.
3748	A. Oct. 1900 F. June 1908	*WACHER, THOMAS BLAKE	2, Upper Bridge Street, Canterbury.
2126	May 1891	WADE, GEORGE TEMPEST	Halford Street, Leicester.
2418	Nov. 1891	WADLING, HY. JOHN, F.R.I.B.A.	Lamb Building, Temple, E.C.
1618	Apr. 1889	WAGSTAFFE, THOMAS ROGERS	c/o Dr. Shepherd, 235, Upper Richmond Road, Putney, S.W.
1699	A. Jan. 1890 F. Oct. 1910	*WAIN, GEORGE SPARROW	Valuer's Office, 10, College Road, Harrow, Middlesex.
843	Dec. 1882	WAINWRIGHT, CHARLES RAWLINS	Shepton Mallet, Somerset.
1631	Nov. 1889	WAINWRIGHT, THOMAS TAYLOR (<i>Past-President</i>)	13, Union Court, Castle St., Liverpool.
5098	Oct. 1907	*WAKEFORD, ARTHUR JAMES ..	161, Clapham Road, S.W.
1392	May 1887	WALCOTT, LYONS RODEN SYMPSON	1, Gray's Inn Place, W.C.
2995	A. Oct. 1895 F. June 1906	*WALDRAM, PERCY JOHN	12, Buckingham St., Charing Cross, S.W.

Date of Election and of Transfer.	FELLOWS.	Address.
Nov. 1890	WALKER, SIR FRANCIS ELLIOTT, BART.	Swansfield House, Alnwick, Northumberland.
Nov. 1891	WALKER, GEORGE BOOTH	Wainfleet, Lincolnshire.
Feb. 1899	WALKER, GEORGE JAMES	3, Golden Square, Aberdeen.
Feb. 1882	WALKER, HERBERT, M.I.C.E., F.R.I.B.A.	Albion Chambers, King Street, Nottingham.
A. Feb. 1904 F. Jan. 1909	*WALKER, HOWARD JAMES	Inland Revenue, Bank Chambers, Wigan, Lancashire.
A. Oct. 1903 F. Oct. 1909	*WALKER, JAMES WILLIAM BOYD	Sungei Gadut, Negri Sembilan, F.M.S.
Feb. 1899	WALKER, JOHN	74, Bath Street, Glasgow.
May 1891	WALKER, JOSEPH	South Road, The Park, Nottingham.
Mar. 1890	WALKER, JOSHUA	Bridge Offices, Bridgegate, Retford, Notts
Dec. 1881	WALKER, SAMUEL	22, Moorgate Street, E.C.
Feb. 1899	WALLACE, THOMAS DOUGLAS ..	Callendar Park, Falkirk, Stirlingshire.
Oct. 1898	WALLACE, WILLIAM SYDNEY SMITH	"Annfield," Woodside, Coupar Angus, Perthshire.
A. Dec. 1883 F. May 1897	*WALLIS, JOHN DAVID	57, King Street, Manchester.
Mar. 1882	WALMISLEY, ARTHUR THOMAS, M.I.C.E.	9, Victoria Street, S.W., and Harbour Board Offices, Dover, Kent.
Mar. 1891	WALMISLEY, JOSEPH WILLIAM, F.R.I.B.A.	7, King's Terrace, Southsea, Hants.
Feb. 1898	WALMSLEY, ARTHUR TINDAL, CAPTAIN	8, Surbiton Park Terrace, Kingston-on-Thames, Surrey.
A. Oct. 1900 F. Sep. 1904	*WALSH, FREDERICK LEOPOLD MORFEE	22, Buckingham Street, Adelphi, W.C.
Oct. 1908	*WALSH, JOSEPH FREDERICK ..	Museum Chambers, Halifax.
A. Oct. 1900 F. Dec. 1902	*WALTER, THOMAS JAMES	Gervis Place, Bournemouth, Hampshire.
Dec. 1887	WARD, DANIEL	Hewton, Bere Alston, Devon.
Mar. 1888	WARD, FRANK	Burnville, Tavistock, North Devon.
A. Dec. 1883 F. Nov. 1889	WARD, GEORGE	2, Stowe Road, Goldhawk Road, W.
A. Oct. 1901 F. Nov. 1902	*†WARD, HENRY PAYNE	"Burleigh," Reigate Road, Redhill, Surrey.
Sep. 1895	WARD, THE HON. SOMERSET ..	Carrowdon Castle, Donaghadee, Co. Down
Dec. 1881	WARE, CHARLES EDWIN, M.I.C.E.	Gandy Street Chambers, Exeter.
Nov. 1890	WARING, HERBERT FULLER ..	46, Earl Street, Maidstone.
A. Oct. 1899 F. July 1901	*§WARMINGTON, HERBERT ANDREW CROMARTIE	7, St. James's Street, S.W.
Nov. 1889	WARNER, HENRY	Farringdon, Alton, Hants.
A. Mar. 1869 F. Apr. 1875	WARNER, WILLIAM HENRY ..	130, Mount Street, Grosvenor Square, W.
Oct. 1910	*WARR, GEORGE WALTER	Town Hall, Southwick, Sussex.
A. Oct. 1897 F. Oct. 1902	WARWICK, GEORGE ERNEST ..	Valuation Office, Dublin.
A. Oct. 1904 F. July 1907	*WATERMAN, BERTIE EDWARD ..	18, Tower Road, Dartford, Kent.
Jan. 1883	WATERMAN, JAMES	Tenterden and Ashford, Kent.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
2044	Mar. 1891	WATERS, EDWARD	The Canal, Salisbury.
5856	Oct. 1910	*WATERS, FREDERICK EBENEZER	67, Telephone House, Victoria Embankment, E.C.
758	A. Feb. 1882 F. Mar. 1887	WATERS, WILLIAM RICHARD ..	Highfield, Dyke Road Drive, Brighton.
1101	A. Feb. 1884 F. Mar. 1889	WATKINS, ROBERT ARUNDEL ..	Castle Combe, Chippenham, Wilts.
47	June 1868	WATNEY, DANIEL (Past President)	33, Poultry, E.C.
1957	Jan. 1891	WATNEY, DENDY	4A, Frederick's Place, E.C.
951	A. May 1883 F. Feb. 1887	WATNEY, WALTER DANIEL ..	57, London Street, Norwich.
3604	A. Oct. 1899 F. May 1905	*WATSON, DAVID ALEXANDER ..	The Estate Office, Watlington, Oxford.
4559	A. Oct. 1904 F. Dec. 1905	*WATSON, ERNEST	Broadway Chambers, Westminster, S.W.
2996	A. Oct. 1895 F. Nov. 1899	*WATSON, HERBERT JOHN ..	St. Helen's, Cockermouth, Cumberland and 6, Lendal, York.
1236	A. Dec. 1884 F. Sep. 1895	*WATSON, JAMES BRUCE	Petworth, Sussex.
2425	Nov. 1891	WATSON, JOHN	Cogan Chambers, Bowlalley Lane, Hull.
1290	A. Dec. 1885 F. May 1894	*WATSON, JOHN	Valuer's Office, Bank Chambers, High Street, Doncaster, Yorks.
2913	Sep. 1895	WATSON, WILLIAM JAMES ..	38 and 39, Piccadilly, W.
1456	Feb. 1888	WATT, ALEXANDER	Muncaster Estate Office, Ravensglass, Cumberland.
467	A. Dec. 1876 F. Nov. 1879	WATTS, CHARLES	West-by-Thames, Kingston-on-Thames Surrey.
2426	Nov. 1891	WATTS, SAMUEL LINGARD ..	40, South King Street, Cross Street, Manchester.
1658	Dec. 1889	WAY, HENRY JAMES	109, Lower St. James' Street, Newport Isle of Wight.
284	May 1872	WEALL, JOHN	38, High Street, Watford, Herts.
5440	A. Oct. 1898 F. Jan. 1904	*WEALL, JOHN GRAHAM	38, High Street, Watford, Hertfordshire.
2552	A. Nov. 1892 F. June 1911	*WEATHERHEAD, DAVID WILKINSON	50, Low Street, Keighley, Yorkshire.
3753	A. Oct. 1900 F. Sep. 1902	*WEATHERILL, GEORGE FORD ..	Valuation Office, Raglan Chambers Harrogate, Yorkshire.
700	Jan. 1882	WEAVER, WILLIAM, M.I.C.E. ..	30, Lytton Grove, Putney Hill, S.W.
2915	Sep. 1895	WEBB, CHARLES	Park Place, Tashinny, Mullingar, Co. Westmeath.
5055	A. Oct. 1906 F. Apr. 1911	*WEBB, CLARENCE ALBERT ..	7, Church Road, Penarth, Cardiff.
1725	Feb. 1890	WEBB, WILLIAM	Keeper's Cottage, Furze Hill, Purley Surrey.
3605	A. Oct. 1899 F. Nov. 1903	*WEBBER, HENRY STANTON ..	23, Queen St., Maidenhead, Berkshire.
4562	A. Oct. 1904 F. June 1906	*WEBBER, WILLIAM HENRY ..	7, Great James Street, Bedford Row, W.C.
1908	A. Nov. 1890 F. Feb. 1897	*WEBSTER, HUGH CALTHROP ..	2, Basinghall Street, E.C.

Date of Election and of Transfer	FELLOWS.	Address.
Dec. 1889	WELCH, FREDERICK WILLIAM ..	170, North Street, Brighton, and 30A, Western Road, Hove, Sussex.
A. Oct. 1902 F. Dec. 1910	*WELLS ARTHUR HARVEY	32, Full Street, Derby.
A. Oct. 1899 F. Oct. 1900	*WELLS, FREDERICK BEAUCHAMP	Oficina del Ingeniero, Ferro Carril del Sud, Buenos Ayres.
A. Nov. 1892 F. Oct. 1896	*WELLS, WILLIAM HENRY	116, Kensington High Street, W.
Dec. 1881	WELLSTED, WM. HENRY, M.I.C.E.	Prince's Dock Chambers, Hull.
Sep. 1895	WELPLY, JAMES	65, George Street, Limerick.
A. Oct. 1898 F. Dec. 1902	*WELSH, HUGH	Newton Park Estate, Newton St. Loe, Somersetshire.
Feb. 1897	WENBORN, SIDNEY THOMAS, CAPTAIN	R.E. Office, R.M. College, Camberley, Surrey.
A. Oct. 1893 F. Sep. 1895	*WEST, CHARLES HENRY EDWARD	5A, Orchard Street, Portman Square, W.
A. Oct. 1899 F. Dec. 1901	*WEST, HERBERT JAMES	17, York Place, W.
Feb. 1882	WESTBURY, GEORGE HENRY ..	The Knoll, Andover, Hants.
Oct. 1904	*WESTON, FRANCIS	322, Brixton Road, S.W.
Mar. 1891	WETHERALL, HARRY LANCASTER	Bracklyn, Winchfield, Hants.
A. Oct. 1900 F. Jan. 1907	*WHATLEY, ERNEST JAMES.. ..	Saxondale, Rock Road, Cambridge.
A. Oct. 1896 F. May 1900	*WHEATLEY, STEPHEN GLADSTONE	Lincoln Chambers, Portsmouth Street, Lincoln's Inn Fields, W.C.
A. Oct. 1903 F. June 1908	*WHEELER, FRANCIS WEST.. ..	4, Harwood Road, Walham Green, S.W.
A. Nov. 1892 F. June 1897	*WHEELER, JOHN HENRY WEST..	Inland Revenue, Shaanon Court, Bristol.
A. Oct. 1900 F. May 1910	*§WHELDON, MARTIN LOWISH ..	5, Coney Street, York
A. Oct. 1908 F. Oct. 1910	*WHIPP, THOMAS WILLIAM.. ..	15, Valley Bridge Parade, Scarborough, Yorkshire.
Nov. 1891	WHITE, ALFRED EDWARD, M.I.C.E.	Town Hall, Hull.
Jan. 1896	WHITE, ARTHUR	99, George Street, Limerick.
A. Oct. 1900 F. Sep. 1904	*WHITE, BENJAMIN WILLIAM ..	15-17, Eldon Street, E.C.
Nov. 1891	WHITE, JAMES ALEXANDER ..	18, High Street, Dorking, Surrey.
Sep. 1895	WHITE, RICHARD.. .. .	Estate Office, Gowran, Co. Kilkenny.
A. Oct. 1895 F. Apr. 1908	*WHITE, WALTER ERNEST COATES	Chatwood, Wokefield Green, Mortimer, Berkshire.
Jan. 1882	WHITELEY, CHARLES PERRY ..	82, Queen Street, E.C.
A. Oct. 1894 F. May 1896	*§WHITTAKER, JOHN DRONSFIELD, B.A. (<i>Cantab.</i>)	Oxford and Cambridge Club, Pall Mall S.W.
A. Oct. 1900 F. July 1902	*WHITTEN, GEORGE JACKSON ..	28, Braxted Park, Streatham, S.W.
A. Oct. 1895 F. Nov. 1900	*WHITTON, PERCY.. .. .	24, Gandy Street, Exeter.
A. Oct. 1901 F. Oct. 1909	*§WIDDICOMBE, CHARLES EDWIN..	Valuation Department, King's Lynn, Norfolk.
A. Oct. 1901 F. Feb. 1907	*WIGLEY, HERBERT HENRY ..	Winslow, Buckinghamshire.
A. Oct. 1899 F. Feb. 1904	*WIGLEY, SIDNEY PRUDEN ..	Winslow, Buckinghamshire.

Dip. No.	Date of Election and of Transfer.	FELLOWS.	Address.
234	A. Feb. 1870 F. Nov. 1876	WIGRAM, JOHN	South Collingham, Newark, Notts.
3443	A. Oct. 1898 F. Oct. 1899	*WIGRAM, REGINALD SPENCER ..	38, Westbourne Gardens, W.
2492	Feb. 1892	WILBRAHAM, EDWARD SIDNEY ..	Estate Office, St. Giles, Salisbury.
3917	A. Oct. 1901 F. May 1910	*WILFORD, CECIL MARSHALL ..	Cathedral Chambers, Castle Street, Carlisle.
2434	Nov. 1891	WILKINS, WILLIAM	63, Chancery Lane, W.C., and Llanely, Carmarthenshire.
1226	Dec. 1884	WILKINSON, THOMAS	170, North Street, Brighton, and 30A, Western Road, Hove, Sussex.
3610	A. Oct. 1899 F. Jan. 1905	*WILLIAMS, ARTHUR CODRINGTON	5, Great College Street, Westminster Abbey, S.W.
1766	Mar. 1890	WILLIAMS, EDWARD BICKERTON	57, Colmore Row, Birmingham.
2425	Nov. 1891	WILLIAMS, GERALD GARNONS ..	Ashburnham Estate Office, Burry Port, Carmarthen.
4315	A. Feb. 1904 F. May 1910	*WILLIAMS, HAROLD	43 and 45, High Street, Croydon.
2738	A. Mar. 1895 F. May 1898	*WILLIAMS, HENRY CUTHBERT ..	36, Lincoln's Inn Fields, W.C.
3760	A. Oct. 1900 F. Jan. 1903	*WILLIAMS, RICHARD ERNEST HAVARD	Valuer's Office, 13, St. Andrew's Crescent, Cardiff.
568	A. Jan. 1880 F. Apr. 1888	WILLIAMS, WILLIAM HERBERT ..	Great Western Railway, Paddington, W.
2617	A. Oct. 1893 F. Feb. 1897	*WILLIS, EDWARD	Engineer and Surveyor's Department, Town Hall, Chiswick, W.
2917	Sep. 1895	WILLIS, GILBERT DE LAVAL ..	Leconfield Estates Office, Ennis, Co. Clare.
1593	Feb. 1889	WILLMOT, GEORGE DYOTT	6, Waterloo Street, Birmingham.
807	A. Apr. 1882 F. May 1887	WILLMOT, JOHN (Member of Council)	6, Waterloo Street, Birmingham.
5349	Feb. 1908	WILLS, JOHN BROOM	15, Bellgrove Street, Glasgow.
5613	Oct. 1909	*WILMOT, HUBERT DE BURGH ..	The Milton Estate Office, Priestgate, Peterborough.
2919	Sep. 1895	WILSON, ARTHUR JOHN DE COURCY	Madresfield Grange, Malvern, Worcestershire.
5569	Feb. 1909	*WILSON, FREDERICK	City Engineer's Department, 63, Queen Square, Bristol.
3445	A. Oct. 1898 F. Oct. 1899	*WILSON, FREDERICK ROBERT ..	31, Rowfant Road, Balham, S.W.
3488	Feb. 1899	WILSON, JAMES, C.A.	135, Wellington Street, Glasgow.
3141	A. Oct. 1896 F. Jan. 1899	*WILSON, LAWRENCE RICHARD ..	Bank of England Chambers, Tib Lane, Manchester.
662	Dec. 1881	WILSON, THOMAS SILK (Member of Council)	Bank of England Chambers, Tib Lane, Manchester.
1449	A. Jan. 1888 F. Feb. 1904	*WILSON, WILLIAM EDWARD ..	Bank of England Chambers, Tib Lane, Manchester.
1962	Jan. 1891	WILSON, WILLIAM HENRY	5, New Brown Street, Manchester.
1963	Jan. 1891	WINTERTON, HARRY JOHN CAM- PION	St. Mary's Chambers, Lichfield, Staffordshire.

Date of Election and of Transfer.	FELLOWS.	Address.
Jan. 1891	WINTERTON, WILLIAM MOXON ..	30, High Street, Burton-on-Trent, Staffordshire.
Nov. 1891	WISE, CHARLES DACRES	Overbury, Tewkesbury, Gloucestershire.
Nov. 1891	WOLLEY, THOMAS JOHN	Clungunford Estate Office, Aston-on-Clun, Salop.
A. Feb. 1894 F. Jan. 1899	*WONNACOTT, ERNEST WILLIAM MALPAS, A.R.I.B.A.	199, Piccadilly, W.
A. Oct. 1898 F. Jan. 1906	*WONTNER-SMITH, PERCY	Valuers' Office, 29, Romford Road, Stratford, E.
A. Nov. 1890 F. May 1891	*WOOD, CHARLES BRUCE	3, Gressenhall Road, Wandsworth, S.W.
A. Oct. 1906 F. Mar. 1909	*WOOD, DOUGLAS, A.R.I.B.A. ..	Orchard Cottage, Coombe Lane, Kingston Hill, Surrey, and 27, Sackville Street, Piccadilly, W.
Mar. 1888	WOOD, JOHN DANIEL	6, Mount Street, W.
A. Feb. 1898 F. May 1905	*WOOD, JOHN EDWARD	14, Southampton Street, W.C.
A. Oct. 1902 F. June 1910	*WOOD, JOHN GUY	6, Mount Street, Grosvenor Square, W.
A. Oct. 1894 F. Apr. 1901	*† WOOD, LESLIE STUART	East Grinstead, Sussex.
Nov. 1890	WOODBIDGE, STEPHEN, JUN. ..	210, High Street, Brentford.
Oct. 1905	*WOODCOCK, ROBERT FRANK ..	Haslemere, Surrey.
May 1891	WOODMAN, THOMAS FOSTER ..	32, St. Peter Street, St. Albans, Herts.
A. Oct. 1898 F. Apr. 1901	*WOOD-MARTIN, HENRY ROGER BROMHEAD	Cleveragh, Sligo.
A. Nov. 1892 F. Sep. 1895	*WOODS, ARTHUR GEORGE	Hampton House, Grove Road, Hounslow, Middlesex.
May 1891	WOODS, THOMAS	4 and 5, Church Parade, Hounslow, Middlesex.
A. Jan. 1882 F. Apr. 1890	WOODWARD, WM., F.R.I.B.A. ..	13, Southampton Street, Strand, W.C.
A. Oct. 1897 F. Oct. 1898	*WOOF, ROBERT STEPHENSON ..	Lowther, Penrith.
Mar. 1891	WOOLLEY, JOHN TURTON	Spursholt, Romsey, Hampshire, and The Castle Auction Mart, Salisbury.
Feb. 1881	WOOLLEY, REGINALD	Silver Street, Lincoln, and South Collingham, Newark, Notts.
A. Feb. 1876 F. Nov. 1880	WOOLLEY, THOMAS CECIL SMITH	South Collingham, Newark, Notts.
A. Nov. 1871 F. Jan. 1877	WOOLLEY, W. EDWARD (Vice-President).	Rectory Place, Loughborough, Leicestershire.
Nov. 1890	WORDSWORTH, ROBERT WALTER	Whitemoor, Ollerton, Notts.
Oct. 1909	*WORRALL, ERNEST	Stretford Council Offices, Old Trafford, Lancashire.
A. Dec. 1881 F. Jan. 1887	WREATHALL, ROBERT T.	The Vestry Hall, St. Martin's Place, Trafalgar Square, W.C., and Manor House, Greenhill, Harrow, Middlesex.
Nov. 1891	WRENNALL, WILLIAM	9, Harrington Street, Liverpool.

Dip. No.	Date of Election and of Transfer	FELLOWS.	Address.
2442	Nov. 1891	WRIGHT, CHARLES WILLIAM, M.A. (<i>Cantab.</i>)	21, Parkinson Street, Nottingham.
4324	Oct. 1904	WRIGHT, GEORGE JOHN, CAPTAIN	Royal Engineer Office, Town Barracks Exeter.
2443	Nov. 1891	WRIGHT, GEORGE THOMAS GREEN	3, Great Winchester Street, E.C.
4889	Oct. 1906	*WRIGHT, HERBERT ALFRED	43, Penton Street, Pentonville, N.
5063	A. Oct. 1906 F. Nov. 1908	*WRIGHT, ISAAC THOMAS	61, West Bank Road, Devonshire Park Birkenhead.
3923	A. Oct. 1901 F. May 1910	*WRIGHT, WALTER BRERETON . . .	6, Glisson Road, Cambridge.
292	Dec. 1872	WRIGHT, WILLIAM EDWARD	King's Lynn, Norfolk.
1749	Feb. 1890	WRIGHTSON, ARTHUR FREDERICK	26, Budge Row, E.C.
2726	A. Oct. 1894 F. Dec. 1902	*WYATT, ARCHIBALD	East Lodge, Fareham, Hampshire.
3448	A. Oct. 1898 F. July 1901	*WYATT, HERBERT GUY BUCKELL	Elmhurst, Summersdale, Chichester Sussex.
722	Jan. 1882	WYATT, OLIVER NEWMAN	East Street, Chichester, Sussex.
2620	A. Oct. 1893 F. Nov. 1895	*WYLES, JOHN WALTER	Glenmore, Tavistock Road, Snaresbrook Essex.
1120	Mar. 1884	WYLEY, HENRY JAMES	Bridgnorth, Shropshire.
5064	A. Oct. 1906 F. June 1911	*YEATMAN-BIGGS, WILLIAM HUYSHÉ	Shaw House, Tarporley, Cheshire.
2445	Nov. 1891	YORK, HENRY	East Barnet Valley Urban District Council, Station Road, New Barnet, Herts.
599	A. Jan. 1881 F. Jan. 1891	YOUNG, ANDREW (<i>Member of Council</i>)	London County Council, 9, Spring Gardens, S.W.
4100	A. Oct. 1903 F. Apr. 1911	*YOUNG, CHARLES ALEXANDER . . .	51, Coleman Street, E.C.
1830	May 1890	YOUNG, DOUGLAS	51, Coleman Street, E.C.
2921	Sep. 1895	YOUNG, GEORGE LAWRENCE	Randalstown, Co. Antrim.
2473	A. Nov. 1891 F. Nov. 1892	*YOUNG, HARRY AUSTIN LINDSAY	Eastney, Weymouth, Dorset.
5350	Feb. 1908	YOUNG, HENRY STEPHEN MATTHEWS	Heathfield, Irvine, Ayrshire.

Date of Election and of Transfer	FELLOWS.	Address.
A. Oct. 1902 F. Oct. 1910 A. Dec. 1878 F. Feb. 1891	*YOUNG, HERBERT OSWALD YOUNG, MORGAN HENRY	12, St. John's Lane, Liverpool. 17, Southampton St., Bloomsbury Square, W.C.
Nov. 1891	YOUNG, OSWALD WILLIAM.. ..	Mersey Docks and Harbour Board, Liver pool.
Nov. 1891	YOUNG, THOMAS	6, Warwick Court, Gray's Inn, W.C.
A. Oct. 1897 F. Feb. 1900	*YOUNG, THOMAS JOHN	The Agricultural College, Holmes Chapel, Cheshire.
Feb. 1899	YUILLE, ROBERT.. .. .	70, South Portland Street, Glasgow.

Total Number of Fellows, 1,900.

Professional Associates.

The names of those Professional Associates who have qualified for the Class by Examination are distinguished thus *

The names of those Professional Associates who have further qualified by Examination for, but have not yet been transferred to the Class of Fellows, are distinguished thus ¶

The names of those Professional Associates who have gained prizes at the Institution Examinations are distinguished thus §

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4350	Oct. 1904	*ABBOTT, ALEXANDER HENRY ..	2, Boscombe Chambers, Boscombe Bournemouth, Hants.
4890	Oct. 1906	*ABBOTT, ARTHUR JOE.. ..	Lansdowne Villa, Bulwer Road, New Barnet, Herts.
2648	Oct. 1894	*ADAMS, GERALD JAMES FRED- ERICK.. .. .	52, Byne Road, Sydenham, S.E.
2929	Oct. 1895	*ADAMS, HERBERT	38, Sloane Street, Belgravia, S.W.
4351	Oct. 1904	*¶ADAMS, HUBERT ARTHUR.. ..	Bishop's Croft Cottage, The Mount Guildford, Surrey.
5857	Oct. 1910	*AGATE, HARRY BERTRAND ..	Fernfield, Ellesmere Park, .Eccles, Lancashire.
5858	Oct. 1910	*AITON, ROBERT SCOTT.. ..	Estate Office, Croxdale, Co. Durham.
5385	Oct. 1908	*ALDERSON, CHARLES HENRY ..	18, Whitehall Road, Hanwell, W.
4352	Oct. 1904	*¶ALLEN, HAROLD COLIN	Tudor House, Alma Road, St. Albans Herts.
2564	Oct. 1893	*ALLEN, JOHN PARNELL	23, Victoria Buildings, Grainger Street West, Newcastle-on-Tyne.
5099	Oct. 1907	*ALLEN, NEWSTEAD ADAMS.. ..	General Delivery, G.P.O., Montreal.
4616	Oct. 1905	*ALLEN, OLIVER WYLIE	8, Frederick's Place, Old Jewry, E.C.1.
5859	Oct. 1910	*¶ALLEN-LODGE, ALBERT ROBERT	4, Adelphi Terrace, Strand, W.C.
4617	Oct. 1905	*ALLFREY, HUGH LIONEL	Old Place, Sandhurst, Hawkhurst, Kent.
3339	Oct. 1898	*ALLPRESS, HORACE EDWARD ..	35, Perrymead Street, Eel Brook Common, S.W.
4127	Oct. 1903	*¶ALLSOP, BENJAMIN GEORGE KID- STON	141, Park Road, N.W.
5860	Oct. 1910	*ALVES, HAROLD NORMAN	21, Norbries Road, Glastonbury, Somerset.
5861	Oct. 1910	*AMENT, ROBERT	The Home Farm, Rosneath Castle Dumbartonshire.
3952	Oct. 1902	*¶AMIES, HERBERT CHRISTOPHER..	c/o Sir John Jackson (Chili), Ltd., Arica Chili.
5100	Oct. 1907	*¶AMOORE, HENRY JAMES	Waterworks, Lurjapur, United Provinces, India.
2931	Oct. 1895	*ANDERSON, THOMAS JOHN.. ..	6, St. James's Road, Kingston-on-Thames, Surrey.
4618	Oct. 1905	*¶ANDREW, ROBERT CHARLES, N.D.A... .. .	Agricultural College, Uckfield, Sussex.
3340	Oct. 1898	*ANDREWS, ARTHUR GEORGE, LIC. R.I.B.A.	Borough Surveyor's Office, Town Hall Colchester, Essex.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1908	*¶ANDREWS, PERCY CHARLES ..	24, Hill Rise, Richmond, Surrey.
Oct. 1904	*ANDREWS, RONALD SEYMOUR ..	44, Addington Road, Bow, E.
Oct. 1896	*ANDREWS, STEPHEN HAMPTON ..	28, Limesford Road, Waverley Park, S.E.
Oct. 1910	*ANNETT, ERNEST TAYLOR ..	Borough Surveyor's Office, Gillingham, Kent.
Oct. 1906	*ANSTEAD, SYDNEY HERBERT ..	9, Eastern Road, Romford, Essex.
Oct. 1897	*APPLEBY, FRANK SEFTON ..	6, Lord Street, Liverpool.
Oct. 1906	*ARCHER, HAROLD DE BYRLAY ..	Ridgeway, near Sheffield.
Oct. 1901	*¶ARMSTRONG, ALBERT LESLIE ..	12, Dragon Avenue, Harrogate.
Oct. 1908	*¶ARMSTRONG, CLIVE HEATH ..	Westgate, Haltwhistle, Northumberland
Oct. 1899	*ARMSTRONG, JOHN WM. WILSON	"Blacon," Stratford-on-Avon, Warwickshire.
Feb. 1900	*ARNOLD, ALAN	Westgate Chambers, Winchester.
Oct. 1909	*ARNOLD, ARNOLD KEITH ..	11, Gunnersbury Avenue, Ealing, W.
Oct. 1900	*ARNOLD, HARRY HAGON ..	Victoria Chambers, Bank Plain, Norwich.
Oct. 1907	*¶ARNOLD, WILLIAM RICHARD ..	Llwyn-coed, Morriston, S.O., Glamorgan-shire.
Oct. 1910	*ARTHUR, HENRY EDWARD ..	65, High Street, Shadwell, E.
Oct. 1910	*ASH, FRANCIS EDWARD ..	6, Ashfield, Chard, Somerset.
Oct. 1904	*¶ASH, HORACE JAMES, A.R.I.B.A. ..	12, Market Place, Nuneaton, Warwickshire.
Oct. 1904	*¶ASHBRIDGE, PRENTICE MOORE ..	Southweald, Grove Park, Wanstead, E.
Oct. 1908	*ASHTON, ARTHUR	c/o Small and Ashton, Ross, Herefordshire.
Feb. 1903	*§ASHTON, ARTHUR WARD ..	Dominion Land Surveyor, c/o Survey Records Branch, Department of the Interior, Ottawa, Canada.
Oct. 1906	*¶ASKWITH, ARTHUR	9, Mount Joy, Durham.
Oct. 1907	*¶ASPELL, FRED HEWLINGS ..	47, Glenfield Road, Leicester.
Oct. 1909	*ATAK, GEORGE ALBERT SEVERNE	Union Offices, Preston.
Oct. 1910	*ATKIN-BERRY, HERBERT COURTENAY	23, Old Broad Street, E.C.
Oct. 906	*ATKINSON, CHARLES CHRISTOPHER	Cumberland Villa, Headingley, Leeds.
Oct. 1910	*ATKINSON, CLIFFORD GARNETT ..	"Holdene," Florence Road, Wimbledon, S.W.
Oct. 1907	*¶ATTENBOROUGH, GEORGE ..	519, Moseley Road, Birmingham.
Oct. 1898	*¶ATTLEE, EDWARD GUY ..	Green Lane, Burbage, Buxton, Derbyshire.
Oct. 1901	*¶AUBREY, WILLIAM BEAUCHAMP ..	Springfield, Chelmsford, Essex.
Oct. 1908	*¶AUSTEN-LEIGH, LIONEL ARTHUR	Wargrave, Berkshire.
Oct. 1909	*¶AYLIFFE, WALTER SYDNEY ..	"The Shrubberies," Woodside Green, South Norwood, S.E.
Oct. 1909	*AYLMER, GUY	Risby Manor, Bury St. Edmunds, Suffolk.
Oct. 1905	*¶AYLWARD, GEORGE THOMAS ..	Oxford Lodge, Nutley, Basingstoke, Hampshire.

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4356	Oct. 1904	*Aynsley, Douglas Farrer ..	20, Wolveleigh Terrace, Gosforth, Newcastle-on-Tyne.
5104	Oct. 1907	*†Bacon, Frank	Sprowston, The Drive, Snaresbrook Essex.
4896	Oct. 1906	*Bagnall, Edward George ..	92, High Street, Notting Hill, W.
5867	Oct. 1910	*Bagshaw, Noel Boughton ..	Iselden, Headlands, Kettering, Northamptonshire.
5619	Oct. 1909	*Bailey, Alfred Horace ..	15A, Old Elvet, Durham.
5105	Oct. 1907	*§ Baines, William Henry ..	569, Jersey Avenue, Jersey City, New Jersey, U.S.A.
5868	Oct. 1910	*Baker, Alfred James ..	5, Mount Street, W.
4357	Oct. 1904	*Baker, Frank Leslie ..	c/o Government Survey Offices, Colombo Ceylon.
5620	Oct. 1909	*Baker, Henry George ..	20, Lansdowne Road, Aldershot, Hampshire.
5621	Oct. 1909	*Baker, Henry Thomas George	18, Stanley Villas, Wallington, Surrey
4898	Oct. 1906	*Balcomb, Cecil Augustus ..	278, Christchurch Road, Bournemouth
5391	Oct. 1908	*Balden, John Whiteley ..	Bywell, Dewsbury, Yorkshire.
5106	Oct. 1907	*Baldwin, Austin Provost ..	c/o Messrs. Holloway Price and Co Market Harborough, Leicestershire.
3787	Oct. 1901	*Baldwin-Wiseman, William Ralph, M.Sc., F.G.S., A.M.I.C.E.	24, Winchester Road, Southampton.
5392	Oct. 1908	*Ball, Francis Leopold ..	Whittington Chambers, King's Road Southsea, Hampshire.
1522	Dec. 1888	*Ball, James Benjamin ..	Great Central Railway, Engineer's Office Marylebone Station, N.W.
4899	Oct. 1906	*Ball, James Robert ..	L. and N. W. Rly., Estate Department Euston Station, N.W.
5393	Oct. 1908	*Ball, Victor Henry ..	8, Hampstead Hill Gardens, N.W.
4622	Oct. 1905	*Ballard, William Edgar, A.M.I.C.E.	Engineer and Surveyor's Office, 23 and 25, Valentine Road, King's Heath Worcestershire.
4358	Oct. 1904	*Balster, Stephen ..	94, Lansdowne Road, Seven Kings, Ilford Essex.
5103	Oct. 1907	*Banham, Edward Longley ..	Ashcroft, Penn, Buckinghamshire.
3641	Oct. 1900	*Banks, Edward John Stanley	163, Cricklewood Broadway, N.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1905	*BANNISTER, MONTAGU DOUGLAS	Buntinghill, Cuckfield, Sussex.
Oct. 1910	*BANTON, LUTHER GEORGE ..	34, Ellesmere Avenue, North Circular Road, Dublin.
Oct. 1904	*BARBER, HARRY JOHN	7, St. Helena Road, Redland, Bristol.
Oct. 1902	*BARCLAY, ROBERT HERMAN ..	20, King's Avenue, Clapham Park, S.W.
Oct. 1903	*BARE, ARNOLD EDWIN	Kingsgate House, 115, High Holborn, W.C.
Oct. 1908	*BARING, ARTHUR.. .. .	34, Great Cumberland Place, W.
Oct. 1901	*BARKER, HERBERT GRAHAM ..	18, Arterberry Road, Wimbledon, S.W.
Oct. 1906	*BARNARD, DENNIS CHRISTOPHER	The Shirehouse, Norwich.
Oct. 1904	*BARNHAM, GEORGE WILLIAM ..	Griston, Watton, Norfolk.
Jan. 1885	*BARRATT, HARRY.. .. .	Hill View, Corser Street, Stourbridge, Worcestershire.
Oct. 1908	*BARRETT, THOMAS NORMAN ..	Beech Mount, Ellesmere Park, Eccles, Lancashire.
Oct. 1905	*BARRONS, BERTRAM ALONZO ..	Devon Estate Office, Powderham, Exeter.
Oct. 1904	*BARTHOLOMEW, CHARLES FRED- ERICK.. .. .	7, Edge Hill, Plumstead, S.E.
Oct. 1910	*BARTHOLOMEW, EUGENE WYCLIFFE	Public Works Department, Colombo, Ceylon.
Oct. 1906	*BARTLETT, ROBERT DUDLEY ..	8, Winton Avenue, Westcliff-on-Sea, Essex.
Oct. 1904	*BARTON, SYDNEY FREDERICK ..	Forest View, The Drive, Walthamstow, N.E.
Oct. 1902	*BASTABLE, JOHN DANIEL	48, Scotland Road, Stanwix, Carlisle.
Oct. 1903	*BATEMAN, FRANK GRAHAM.. ..	Graig, Llanfair P.G., Anglesey.
Oct. 1906	*BATES, ARTHUR ROGER ALBERT	Surveyor's Department, Great Northern Railway, King's Cross, N.
Oct. 1904	*BATES, OSCAR GEORGE	Montague House, Montague Road, Croydon.
Oct. 1910	*BATES, PERCY	354, London Road, Thornton Heath, Surrey.
Oct. 1903	*BATSTONE, WALTER WATERFIELD	110, Cannon Street, E.C.
Oct. 1901	*BATTERBURY, NORMAN BONIFACE	4, Whitehall Place, S.W.
Oct. 1907	*BATZER, ALBERT EDWARD.. ..	136, Birchanger Road, South Norwood, S.E.
Oct. 1906	*BAX, WILLIAM MOLYNEUX.. ..	"Elmhurst," Rosenthal Road, Catford, S.E.
Oct. 1908	*BAXTER, ARTHUR SUNDERLAND..	9, Morella Road, Wandsworth Common, S.W.
Oct. 1903	*BAXTER, GEORGE COULSON	1, Frederick's Place, Old Jewry, E.C.
Oct. 1906	*BAYDEN, EDWARD	17, Glenshiel Road, Eltham Park, Eltham, S.E.
Oct. 1905	*BAYES, JOHN GEORGE.. .. .	District Valuer's Office, High Wycombe, Bucks.

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3643	Oct. 1900	*BAYLIS, ALBERT EDWARD	H.M. Office of Works, Storey's Gate, S.W.
3511	Oct. 1899	*BAYLIS, ALFRED WILLIAM	41, Clarence Road, Moseley, Birmingham.
4856	Feb. 1906	*BAYNHAM, EDMUND CHRISTOPHER	The Abbey, Eye, Suffolk.
3076	Oct. 1896	*BEACH, ARCHIBALD WILLIAM HICKS, MAJOR	Eathorpe Hall, Leamington, Warwickshire.
5623	Oct. 1909	*BEALE, DONALD OLAF CHRISTOPHER	Uckfield, Sussex.
5624	Oct. 1909	*B EAR N, ARTHUR FREDERICK ..	Cedar Lawn, Wellingborough, Northamptonshire.
5872	Oct. 1910	*BEAUMONT, JOHN EDMUND ..	4, Benson Road, Forest Hill, S.E.
5873	Oct. 1910	*BEAUMONT, RAYMOND PILBEAM	2, Richmond Terrace, Brighton.
4132	Oct. 1903	*BEAVEN, HOWARD CLIFFORD ..	2, Church Passage, High Street, High Barnet, Hertfordshire.
4134	Oct. 1903	*B ED FORDE, CHARLES EDGAR ..	10, Wigmore Street, W.
4365	Oct. 1904	*B ED FORDE, REGINALD LEWIS JOSHUA	48, Julian Avenue, Acton, W.
3347	Oct. 1898	*B ED WELL, ERNEST CHARLES ..	29, Fleet Street, E.C.
5400	Oct. 1908	*B EE VER, ROWLAND	Woodland Mount, Bradford Road North, Huddersfield.
5625	Oct. 1909	*B EK EN, REGINALD WALTER ..	Beauvoir House, Englefield Road, North Mymms, Herts.
5874	Oct. 1910	*B ELL , FRANCIS ASKEW	Wellow House, Newark.
4906	Oct. 1906	*B ELL , HARRY CECIL	Shirley Croft, Grantham.
5875	Oct. 1910	*B ELL , OSWALD	13, Streatham Hill, S.W.
5626	Oct. 1909	*B ELL , WALLACE ALFRED	The Willows, Belvidere Rd., Walsall, Staffs.
4366	Oct. 1904	*B ELL AMY, HARRY	30, Scarcroft Road, York.
4367	Oct. 1904	*B EN JAMIN, ASHLEY FLORIAN ..	The Chestnuts, Chalfont St. Peter, Bucks.
5401	Oct. 1908	*B EN NETT, ARTHUR JOHN	1, Montpelier Terrace, Swansea, Glamorgan.
5876	Oct. 1910	*B EN NETT, FRANK WILLIAM ..	"St. Juliens," Westcross, near Swansea.
5823	Feb. 1910	*B EN NETT, MAURICE CHRISTMAS ..	39, Blagrove Street, Reading.
5402	Oct. 1908	*B EN NETT, STEPHEN AUGUSTUS ..	Deputy County Surveyor, Newport, Monmouth.
5877	Oct. 1910	*B EN NETT, SYDNEY	Eagle Chambers, Kingston-on-Thames, Surrey.
5110	Oct. 1907	*B EN SON, RALPH FRANCIS	2, Stanley Terrace, Preston, Lancashire.
4627	Oct. 1905	*B ENT LEY, ARTHUR WATERHOUSE	24, Great Winchester Street, E.C.
2933	Oct. 1895	*B ENT LEY, HAROLD EDWIN	43, Chancery Lane, W.C.
4621	Oct. 1905	*B ENT ON, GERALD SYDNEY	Messrs. Hill and Co., 192, Church Road, Hove, Sussex.
3791	Oct. 1901	*B ERRY , ALGERNON LAWRENCE ..	195, Strand, W.C.
3957	Oct. 1902	*B ERRY , HENRY FRANK	9, Victoria Street, Westminster, S.W.
3792	Oct. 1901	*B ETT GER, HAROLD ALFRED	3, Warwick House Street, Cockspur Street, S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1908	*BETRIDGE, SIDNEY WOODWARD	39, Deauville Court, Clapham Park, S.W.
Oct. 1910	*|| BEVAN, ROLAND STANLEY ..	32, Fitzroy Street, W.
Oct. 1907	*BEVERLEY, ROBERT BERTHOLD	Heath House, near Wakefield, Yorkshire.
Oct. 1906	*|| BEVINGTON, ERNEST	41, Cranley Gardens, Muswell Hill, N.
Oct. 1898	*BIBBEY, THOMAS	Stallington Estate, Cheadle, Staffordshire.
Oct. 1897	*|| BICKFORD, JOSEPH GRANT ..	11, Adam Street, Adelphi, W.C.
Oct. 1907	*|| BIGWOOD, ERNEST GUY ..	158, Edmund Street, Birmingham.
Oct. 1910	*|| BILSON, CHARLES FREDERICK	59, Whitehall Park, Highgate, N.
Oct. 1908	*|| BINDLOSS, CHARLES HILTON	Skelton Hall, Yorkshire.
Oct. 1900	*|| BINGHAM, WILLIAM RAPER ..	5, Lyndhurst Road, Peckham, S.E.
Oct. 1905	*|| BINNS, HENRY WILLIAM ..	141, Park Road, N.W.
Oct. 1906	*BINNS, MAURICE ALFRED ..	Fairbairn, St. Augustine's Avenue, South Croydon.
Oct. 1906	*BIRD, AUGUSTUS GORDON ..	29A, Lincoln's Inn Fields, W.C.
Oct. 1908	*BISHOP, ERNEST WILLIAM ..	11, Cromwell Avenue, Highgate, N.
Feb. 1907	*|| BISHOP, HORACE STANLEY CHARLES	The Laurels, East Harnham, Salisbury.
Oct. 1906	*BISLEY, CLAUDE VIVIAN ..	Redriffe, Avondale Road, Hove, Sussex.
Oct. 1905	*BLABER, MONTAGUE	Hailsham, Sussex.
Oct. 1904	*BLACKMAN, JOHN WILLIAM BERNARD, A.M.CAN.SOC.C.E.	City Engineer, City Hall, New Westminster, British Columbia, Canada.
Oct. 1909	*BLACKMORE, ALFRED CHARLES ..	Belmont, Cottingham, East Yorkshire.
Oct. 1897	*|| BLACKSHAW, CHARLES	3, Victoria Mansions, Grange Road, Willesden Green, N.W.
Oct. 1907	*BLAIR-IMRIE, HEW	Lunan House, Montrose, N.B.
Feb. 1905	*BLAKE, ALFRED EVELEIGH ..	118, High Street, Slough, Bucks.
Oct. 1903	*BLAKE, ALFRED NORMAN ..	The White Cottage, Gosport, Hampshire.
Oct. 1905	*BLAKE, REGINALD LAPHORNE ..	46, Commercial Road, Portsmouth.
Oct. 1905	*BLENCOWE, SIDNEY	Oficina del Ingeniero, Ferro Carril del Sud, Plaza Constitucion, Buenos Aires.
Oct. 1904	*BLESSLEY, VICTOR HENRY ..	Finchley Road Station, Land N.W.Ry., Hampstead, N.W.
Oct. 1903	*|| BLISS, FRANCIS GEORGE ..	164, Bethnal Green Road, N.E.
Oct. 1901	*|| BLISS, THEODORE STEPHEN ..	Bedford Office, Tavistock, Devonshire.
Oct. 1906	*|| BLOIS, BASIL FREDERIC ..	Messrs. Owen. Blois & Owen, New-castle, Staffs.
Oct. 1905	*|| BLOMFIELD, CHARLES GEOFFREY	2, Gentrannon Park, Orpington, Kent
Oct. 1908	*BLOOR, RICHARD ASHTON ..	Bridge Engineer's Office, Canadian Northern Railway, Winnipeg, Manitoba.
Oct. 1902	*BLORE, CHARLES GORDON ..	Idsworth Estate Office, Horndean, Hampshire.
Oct. 1908	*BLOW, THOMAS BERTRAM ..	The Vale, Blackheath, S.E.
Feb. 1909	*BLOXHAM, DOUGLAS	c/o Surveyor-General's Office, Colombo, Ceylon.

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3646	Oct. 1900	*BLYTH, HAROLD KING	Director of Works Department, Admiralty, S.W.
4373	Oct. 1904	*BODEN, HARROLD CASSWELL	59, Oakhill Road, Putney, S.W.
3077	Oct. 1896	*BODEN, MAURICE	133, Finchley Road, N.W.
2570	Oct. 1893	*BODGER, PERCY MORRIS	28, Bishopsgate Street, Norwich
5580	Oct. 1910	*BOLTON, FRANK HOLMES	78, King Street, Manchester.
1159	May 1884	BOND, FREDERICK GEORGE	Old Bank House, Ipswich.
5628	Oct. 1909	*BOND, GERALD EDWARD	Messrs. Cobb, Higham, Rochester, Kent
2936	Oct. 1895	*BOORD, WALTER BERTRAM	Bewerley, Pateley Bridge, Yorkshire.
3512	Oct. 1899	*BOOTH, ERNEST WITTON, A.M.I.C.E.	29, Granville Road, Fallowfield, Manchester.
5881	Oct. 1910	*BOOTH, HERBERT	District Valuer's Office, Commercial Street, Halifax.
3078	Oct. 1896	*BOSHER, VICTOR EVANS	19, Charing Cross Road, W.C.
4914	Oct. 1906	*BOTT, WILLIAM ALFRED	60, Newcastle Street, Burslem, Staffs.
3960	Oct. 1902	*BOULTON, CHARLES VALENTINE	17, Wandle Road, Upper Tooting, S.W.
1331	Dec. 1886	*BOUSFIELD, EDWIN VAUGHAN DAVENPORT	99, Gresham Street, E.C.
5582	Oct. 1910	*BOUSTRED, HENRY NORMAN	63, Talbot Road, Highgate, N.
2133	May 1891	*BOWDEN, ERNEST NEWTON	14, Ridgefield, Manchester.
4374	Oct. 1904	*BOWEN, EDWARD BEDDOE	Town Hall, Hackney, N.E.
5629	Oct. 1909	*BOWER, THOMAS HAWKESLEY	18, Deauville Road, Clapham Park, S.W.
5114	Oct. 1907	*BOWES, CHARLES	16, Valley Bridge Parade, Scarborough, Yorks.
4635	Oct. 1905	*BOWES, OSBORNE JOHNSTONE	Messrs. J. P. Allen and Partners Victoria Buildings, Grainger Street West, Newcastle-on-Tyne.
5883	Oct. 1910	*BOWTELL, WILLIAM EDGAR	Valuer's Department, Inland Revenue 78, King Street, Manchester.
4915	Oct. 1906	*BRADFORD, DANIEL	6, Carlton Chambers, 12, Regent Street S.W.
5115	Oct. 1907	*BRADLEY, BENJAMIN	Norwich Union Buildings, Edmund Street Birmingham.
4916	Oct. 1890	*BRADLEY, CECIL GUSTAV	Engineer and Surveyor's Office, Goolbs Yorkshire.
3079	Oct. 1896	*BRADSHAW, ARTHUR STANLEY	Public Works Department, Freetown Sierra Leone, West Africa.
3962	Oct. 1902	*BRADSHAW, HAROLD CLAUD	Biddulph, near Congleton (Staffs.).
5630	Oct. 1909	*BRADSHAW, HENRY HERBERT	63, Prospect Terrace, Altham, Accrington Lancashire.
3514	Oct. 1899	*BRAND, EDMUND	c/o H.D. Cornfoot, 31, Lombard St., E.C.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1907	*BRASSEY, ROBERT EGERTON ..	Bulkeley Grange, Malpas, Cheshire.
Oct. 1908	*BRAY, EDWIN	Town Street, Stanningley, Leeds.
Feb. 1905	*BRY, JOCELYN	Coast Bank, Westcott, Dorking, Surrey.
Feb. 1906	*BRAY, JOHN SANDERS.. ..	Ogbeare Estate Office, Holsworthy, N. Devon.
Oct. 1904	*BREBNER, ROBERT FREDERICK..	Estate Office, Strathallan Castle, Machany, Perthshire.
Oct. 1901	*BRENT, THOMAS	Messrs. Chesterton and Sons, Norbury Manor Estate Office, London Road, Norbury, S.W., and 4, Norbury Crescent, Melfort Road, Norbury, S.W. (Surrey Committee).
Oct. 1906	*BRETTELL, CHARLES BANDON ..	2, Sylvan Grove, Chorlton-on-Medlock, Manchester.
Oct. 1908	*BREWER, HORACE GEORGE CHARLES	35, Gathorne Road, Wood Green, N.
Oct. 1910	*BRIANT, BERNARD	200, Kennington Park Road, S.E.
Oct. 1906	*BRIDGER, ARTHUR EDWARD ..	Greywell, Winchfield, Hampshire.
Dec. 1889	*BRIDGFORD, LEO APPLETON ..	65, King Street, Manchester.
Oct. 1910	*BRIGDEN, WILLIAM ERNEST ..	83, Bedford Hill, Balham, S.W.
Oct. 1907	*BRIGGS, ALFRED DENBIGH..	63, Old Park Road, Palmer's Green, N.
Feb. 1887	*BRIGGS, JOHN	36, Tooting Bec Gardens, Streatham, S.W.
Oct. 1908	*BRIGHT, TOM SPENCER	Lynton Villa, Tehidy Road, Camborne, Cornwall.
Oct. 1909	*BRIGHTEN, CLAUDE WILLIAM ..	Ockham, Ripley, Surrey.
Oct. 1906	*BRISTOW, BENJAMIN FRANKLAND	19, Brierfield Avenue, Church End, Finchley, N.
Oct. 1907	*BRISTOW, WILLIAM	Borough Surveyor's Department, Town Hall, Kensington High Street, W.
Oct. 1906	*BROAD, GORDON LESLIE	9, Adolphus Road, Finsbury Park, N.
Oct. 1902	*BROAD, SYDNEY LOWTHER	15, Lindfield Road, Ealing, W.
Oct. 1910	*BROCKHURST, HAROLD CECIL..	Room 11, 18, Steelhouse Lane, Birmingham.
Feb. 1906	*BROMLEY, ALAN	Borough Surveyor's Office, Croydon.
Feb. 1905	*BROMLEY, ROBERT CECIL	Homeleigh, Longlands Road, Sidecup, Kent.
Oct. 1899	*BROOKER, FREDERICK GEORGE..	Elm Bank, Sevenoaks, Kent.
Oct. 1899	*BROOKS, WILLIAM NATHANIEL..	Collingham, Newark-on-Trent.
Jan. 1884	BROWN, ALEXANDER	Home Farm, Hothfield, Ashford, Kent.
Feb. 1899	*BROWN, ARTHUR FREDERICK ..	11, Little College St., Westminster, S.W.
Oct. 1906	*BROWN, CHARLES GEORGE	Park Place, Harefield, Middlesex.
Oct. 1909	*BROWN, GEORGE MACDONALD ..	Waldershare Estate Office, Dover, Kent.
Oct. 1902	*BROWN, JAMES CARTER	Harper-Adams Agricultural College, Newport, Shropshire.

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3796	Oct. 1901	*BROWN, JOHN	Abingdon Street, Northampton.
5119	Oct. 1907	*BROWN, JOHN EDWARD	Quantock Estate Office, Bridgwater Somerset.
3929	Feb. 1902	*BROWN, LESLY JOHN	9, Brook Street, W.
5887	Oct. 1910	*BROWN, NORMAN ERNEST	Prospect House, Holmrook, Cumberland
3354	Oct. 1898	*BROWN, THOMAS, JUN.	Woodside, Pollard's Hill North, Norbury S.W.
5413	Oct. 1908	*BROWN, WILLIAM ALFRED	"Langia," Rosslyn Rd., Watford, Herts and 22, Savile Row, Regent Street, W.
1410	Dec. 1887	*BROWN, WILLIAM EDWARD	332, High Road, Kilburn, N.W.
2626	Feb. 1894	*BROWN, WILLIAM LOBIN TRANT	Messrs. Pauling & Co., 1 to 5, Sauer's Buildings, Johannesburg.
3797	Oct. 1901	*BROWNE, EUSTACE MONTAGUE ..	16, Museum Street, Ipswich.
5888	Oct. 1910	*BROWNE, GEORGE FREDERICK ..	8, Frederick's Place, Old Jewry, E.C.
4638	Oct. 1905	*BROWNE, HUGH GILLESPIE	Frogmore, Stanhope Road, Walthamstow E.
3650	Oct. 1900	*BROWNING, EGBERT GEORGE	Elvetham Estate Office, Winchfield Hants.
2656	Oct. 1894	*BRUCE, ALEXANDER DAVID	Highfield End, West Byfleet, Surrey
3651	Oct. 1900	*BRUZAUD, GEORGE JOSEPH	16, Great James Street, Bedford Row W.C.
4639	Oct. 1905	*BRUZAUD, SIDNEY JOHN	Minworth Hall, near Birmingham.
3652	Oct. 1900	*BRYAN, ARTHUR	27, High Street, Cardiff.
5889	Oct. 1910	*BRYANS, MAURICE EDWARD	72, Clifden Road, Twickenham, Middlesex.
944	May 1883	BUCKLAND, WILLIAM THOMAS	"Rosemead," Croham Road, South Croydon.
5890	Oct. 1910	*BUDGEN, WILLIAM HAROLD	London County Council, Architect's Department, S.W.
3801	Oct. 1901	*BULL, THOMAS HENRY	84, Amyand Park Road, Twickenham Middlesex.
4922	Oct. 1906	*BULLER, FRANCIS CHARLES	49 Whitford Gardens, Mitcham, Surrey
4640	Oct. 1905	*BULLOCK, BURNETT	Pencalenick Estate Office, Truro, Cornwall.
5121	Oct. 1907	*BULTEEL, WALTER GORDON	Carnarvon Estate Office, Highclere Newbury, Berkshire.
5633	Oct. 1909	*BUNNY, JOSEPH	Glinton, Knowleston Place, Matlock Derbyshire.
4923	Oct. 1906	*BUNTING, ALFRED HENRY	75, Victoria Road North, Southsea Hampshire.
5634	Oct. 1909	*BURBIDGE, FREDERICK CHARLES ..	Springfield, St. Minver, near Wadebridge, Cornwall.
4924	Oct. 1906	*BURBIDGE, JOHN SAVILLE	66, Cromwell Avenue, Highgate, N.
4380	Oct. 1901	*BURCH, HERBERT	Compton, near Newbury, Berkshire.
2508	Nov. 1892	*BURDER, REGINALD EDWARD CAMPBELL	

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1903	*BÜRGE, ARTHUR JOHN	428, Wandsworth Road, S.W.
Oct. 1905	*BÜRGE, JAMES THOMAS	General Valuation Office, 6, Ely Place, Dublin.
Oct. 1910	*BURGESS, ARTHUR	31, Parkfield Road, Sefton Park, Liverpool.
Feb. 1906	*BÜRKIT, HAROLD, M.S.C. (<i>Durham</i>), N.D.A.	Springwell Villas, Bishop Auckland, Co. Durham.
Oct. 1900	*BÜRMAN, WILLIAM	Estate Office, Kiveton Park, near Sheffield.
Oct. 1908	*BURN-CALLANDER, CUTHBERT ..	
Oct. 1905	*BURN, JOSEPH	Prudential Assurance Company, 142, Holborn Bars, E.C.
Oct. 1905	*BURNETT, LESLIE TREW	99, Gresham Street, E.C.
Oct. 1904	*BÜR, FREDERICK MALCOLM	65, Lakeside Road, Palmers Green, N.
Oct. 1909	*BÜRROWS, EDWARD CRAWFORD ..	82, Victoria Street, Westminster, S.W.
Oct. 1897	*BÜRROWS, FRANK HERBERT	41, Bank Street, Ashford, Kent.
Oct. 1909	*BÜRROWS, PERCY CHARLES	91, Drakefield Road, Upper Tooting, S.W.
Oct. 1903	*BÜRSTOW, RALPH HENRY	46, Station Road, Bexhill-on-Sea, Sussex.
Oct. 1905	*BÜR, JOHN THOMAS	6, Millstone Lane, Leicester.
Oct. 1907	*BÜRTENSHAW, ARTHUR HOWARD	Valuer's Office, 24, Stone Street, Maidstone.
Oct. 1904	*BÜRTON, GEORGE FREDERICK ..	11, Manor Road, Low Side, Oldham, Lancashire.
Dec. 1887	*BÜR, FLEETWOOD GEORGE WILLIAM	4, Verulam Buildings, Gray's Inn, W.C. 10, The Esplanade, Dover.
Oct. 1910	*BÜR, HAROLD GEORGE	
Oct. 1907	*BÜRTER, ARTHUR STANLEY	24, Bennett's Hill, Birmingham.
Oct. 1909	*BÜRTER, REGINALD	13, Lambourne Road, Seven Kings, Essex.
Oct. 1907	*BÜRTER, THOMAS LIONEL	Park Hill, Ipplepen, S. Devon.
Oct. 1910	*BÜRTERFIELD, HENRY AMBLER	"Thornleigh," Wath-on-Dearne, Yorkshire.
May 1884	BÜRTERWORTH, JOSIAH	Mansfield, Notts.
Oct. 1906	*BÜRTRICK, WALTER HAMMOND ..	107, High Street, Scunthorpe, Lincs.
Oct. 1906	*CALLF, GEORGE STUART	Mill Lodge, Seaford, and c/o Stuart Callf and Co., Terminus Buildings, Seaford, Sussex.
Oct. 1910	*CALLOW, CLAYTON HAROLD	71, London Road, St. Leonard's-on-Sea, Sussex.
Oct. 1906	*CAMPBELL, NICHOLAS PETERSON	"Shandon," Serpentine Avenue, Ball's Bridge, Dublin.
Oct. 1910	*CAPPER, WILLIAM	Holme Lea, Porthill, Stoke-on-Trent, Staffs.
Apr. 1882	CARD, HENRY	North Street, Lewes.

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5896	Oct. 1910	*¶ CAREW, CYRIL JOSEPH THEODORE	271, Ladbroke Grove, North Kensington, W.
5126	Oct. 1907	* CAREY, JAMES	Architect's Department, London County Council, 13, Charing Cross, S.W.
5897	Oct. 1910	* CAREY, WILLIAM HENRY	93, Dora Road, Wimbledon Park, S.W.
5898	Oct. 1910	* CARLISLE, WILLIAM JOSEPH . . .	24, York Street, Baker Street, W.
5415	Oct. 1908	*¶ CARPENTER, ROBERT HENRY . .	"Lyndhurst," Burgess Hill, Sussex.
3970	Oct. 1902	* CARR, ARTHUR BENTLEY	14, Cook Street, Liverpool.
5416	Oct. 1908	* CARR, CHARLES WATSON	24, High Street, Eastbourne, Sussex.
3360	Oct. 1898	*¶ CARR, HERBERT FRANCIS . . .	Muswell Hill, N.
5417	Oct. 1908	* CARRINGTON, HAROLD EDWARD	Valuer's Office, Weimar House, Westgate, Chichester.
5127	Oct. 1907	*¶ CARSWELL, ARTHUR GEMMELL . .	Estates Office, Capesthorne, Chelford, Cheshire.
4648	Oct. 1905	* CARTER, JOHN EDWARD	38, Tierney Road, Streatham Hill, S.W.
4929	Oct. 1906	*¶ CASS, ALEXANDER JAMES	104, Lee Road, Blackheath, S.E.
3207	Oct. 1897	* CASSIN, CHARLES LANGA	26, Chudleigh Road, Ladywell, S.E.
5128	Oct. 1907	* CASTELL, DOUGLAS CHARLES . . .	33, Alfred Place West, South Kensington, S.W.
4930	Oct. 1906	*¶ CATON, EDMUND PERCY	Estate Office, Letchworth, Herts.
4111	Feb. 1903	*¶ CATON, THOMAS LINFIELD . . .	82, Acre Lane, Brixton, S.W.
1572	Jan. 1889	* CHALCRAFT, HENRY TERRELL . .	62, Bishopsgate, E.C.
5899	Oct. 1910	* CHAMBERLAIN, CHARLES	28, Durnsford Avenue, Wimbledon Park, S.W.
5638	Oct. 1909	* CHAMBERLAIN, BENJAMIN	43, Lanercost Road, Tulse Hill Park, S.W.
4650	Oct. 1905	* CHAMBERLAIN, HARRY SAMUEL . .	91, St. Andrew's Road, Southsea, Hants.
5077	Feb. 1907	*¶ CHAMBERS, WADDELOW NIX . . .	Messrs. Taylor and Hunt, Yeovil, Somerset.
3971	Oct. 1902	*¶ CHAMPERNOWNE, AMYAS WALTER	Sidbury Manor Estate Office, Sidbury, Sidmouth, Devonshire.
2572	Oct. 1893	* CHAMPION, GEORGE ERNEST . . .	Redwall Farm, Linton, Kent.
5129	Oct. 1907	*¶ CHAMPION, WILLIAM HALL . . .	Woodville, Pitsmoor, Sheffield.
5419	Oct. 1908	* CHANNON, HERBERT EDWARD . . .	Ashleigh, Grove Hill, Woodford, Essex.
5639	Oct. 1909	* CHANT, ARTHUR GUY	Lindow Lodge, Lancaster.
5640	Oct. 1909	*¶ CHAPMAN, ARTHUR HENRY . . .	Metropolitan Water Board, Savoy Court, Strand, W.C.
5641	Oct. 1909	*¶ CHAPMAN, CHARLES ALBERT . . .	18, Martindale, East Sheen, S.W.
5642	Oct. 1909	* CHAPMAN, JOHN FRANK	54, Leicester Square, W.C.
1006	Dec. 1883	CHAPMAN, VAUGHAN GODFREY ST. JOHN	112, Beckenham Road, Beckenham, Kent.
4385	Oct. 1904	* CHAPPLE, JOHN GRADDON	59, Burnaby Gardens, Chiswick, W.
5643	Oct. 1909	* CHARLES, JOHN ACHESON	191, Abbey Road, Barrow-in-Furness, Lancashire.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Feb. 1901	*CHARLES, MICHAEL THOMAS, B.A. (<i>Cantab.</i>)	Pelsall Hall, near Walsall, Staffordshire.
Oct. 1906	*CHART, STEPHEN	Greenview, Mitcham, Surrey.
Oct. 1903	*CHARTRES, FREDERICK WILLIAM CHARLES	Whitehall, Willingham, Beccles, Suffolk.
Oct. 1909	*CHASEMORE, ALEC.	Ashleigh, Horsham, Sussex.
Oct. 1907	*CHAUDOIR, GUSTAVE FELIX	92, Shaftesbury Avenue, W.
Oct. 1907	*CHEW, PERCIVAL THOMAS	Borough Surveyor's Office, Town Hall, Paddington, W.
Oct. 1904	*CHEW, RICHARD	15, Spring Gardens, S.W.
Oct. 1909	*CHILCOTT, ARTHUR SAMUEL FAIRWEATHER	22, Camilla Road, Bermondsey, S.E.
Nov. 1892	*CHILD, CHARLES	Slinfold, near Horsham, Sussex.
Dec. 1888	*CHILD, EDMUND HERBERT, A.R.I.B.A.	12, Middle Pavement, Nottingham.
Feb. 1906	*CHILD, GEORGE MALCOLM	119, Twyford Avenue, Acton, W.
Oct. 1897	*CHIPP, GEORGE	24, South Street, Greenwich, S.E.
Oct. 1899	*CHURCH, GEOFFREY REDMORE	31-33, High Holborn, W.C.
Oct. 1910	*CLARK, ALFRED HENRY	4, Adelphi Terrace, W.C.
Feb. 1908	*CLARK, CHARLES FOWLER	44A, Wellington Road, St. John's Wood, N.W.
Oct. 1905	*CLARK, CUTHBERT HARVEY	8, New Cavendish Street, W.
Oct. 1905	*CLARK, DUNCAN WALTER	3, High Street, Colchester, Essex.
Feb. 1907	*CLARK, HENRY DENTON	c/o G.J. Brown, 11, Little College Street, Westminster, S.W.
Oct. 1903	*CLARK, HERBERT	c/o W. Wallis Baldwin, 35, Lincoln's Inn Fields, W.C.
Oct. 1905	*CLARK, LOUIS VAN	38A, Stondon Park, Honor Oak Park, S.E.
Feb. 1911	*CLARK, PHILIP LOCKHART	13, St. Andrew's Crescent, Cardiff.
Oct. 1905	*CLARK, RAYMUND MONTAGUE	Artificial Stone Co., Abbassia New Barracks, Cairo, Egypt.
Oct. 1904	*CLARKE, ALFRED HOWARD	Ashbourne, The Drive, Walthamstow, E.
Oct. 1899	*CLARKE, LEONARD EUSTACE	Ballynolan, Kildimo, Co. Limerick.
Oct. 1905	*CLARKE, PERCY CHRISTOPHER	Orton Longueville, Peterborough.
Oct. 1907	*CLARKE, ROBERT	15, Selwyn Avenue, Richmond, Surrey.
Oct. 1905	*CLARKE, THOMAS GUY	48, Cardiff Road, Llandaff, Glamorgan-shire.
Oct. 1910	*CLARKSON, JOHN	136, High Street, Poplar, E.
Oct. 1906	*CLOUGH, HERBERT HEALEY	25, Fenton Street, Rochdale, Lancs.
Oct. 1900	*CLUNN, THOMAS HENRY GWY-THER	Department of the Interior, Topographical Survey Branch, Ottawa, Canada.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
5646	Oct. 1909	*COADE, CECIL JAMES	61, Brixton Hill, S.W.
4302	Feb. 1904	*COATES, LAURENCE CALVERT ..	68, Lincoln's Inn Fields, W.C.
3660	Oct. 1900	*COBB, HENRY ALFRED WILLIAM	148, Amesbury Avenue, Streatham Hill, S.W.
3211	Oct. 1897	*COBBE, HENRY ALEXANDER ..	The Turrets Northgate Street, Bury St. Edmunds, Suffolk.
3974	Oct. 1902	*COCKE, EDMUND SIDNEY DEAN ..	2, Liverpool Road, Ealing, W.
3808	Oct. 1901	*COCKS, JOHN FREDERICK	Hertford.
3809	Oct. 1901	*COKER, HARRY REGINALD ELLIS	1, Hanover Street, Rye Lane, Peckham S.E.
3975	Oct. 1902	*COKER, RALPH HECTOR	52, Tassie Street, Shawlands, Glasgow
5647	Oct. 1909	*COLE, CHARLES PHILIPS	Fir Villa, Western Road, Tring, Hert.
5133	Oct. 1907	*COLLARD, PERCY WILLIAM	9, Wolverton Avenue, Kingston Hill, Surrey.
1202	May 1884	COLLIER, ARTHUR CHARLES	5, Lancaster Place, Strand, W.C.
5903	Oct. 1910	*COLLINS, ISAAC	The Hectorage, Tonbridge, Kent.
5904	Oct. 1910	*COLLINS, JAMES STANLEY	Collinwood, Purley Knoll, Purley, Surrey
3811	Oct. 1901	*COLLIS, ERNEST ALBERT	
4150	Oct. 1903	*COLLYER, CHARLES ALEXANDER STEWART	Estate Office, Chesterford Park, Essex
1831	May 1890	*COLLYER, DANIEL WILLIAM	34, Miller Arcade, Preston, Lancashire
4390	Oct. 1904	*COMMANDER, CHARLES CURTIS ..	21, Brisbane Road, Ilford, Essex.
5571	Feb. 1909	*CONQUEST, CLAUDE DUNCOMBE ..	Valuer's Office, Westminster Building, Upper Parliament Street, Nottingham
5648	Oct. 1909	*CONRAN, WILLIAM ADAM BASTARD	Valuer's Department, Westminster Buildings, Upper Parliament Street, Nottingham.
5134	Oct. 1907	*CONWAY, FREDERICK JAMES KELSHAW	12, St. John's Lane, Liverpool.
3524	Oct. 1899	*COOK, EDWARD ARTHUR	Dennington Lodge, Framlingham, Suffolk
3662	Oct. 1900	*COOK, FREDERICK CHARLES	Council Offices, Nuneaton, Warwickshire.
5420	Oct. 1908	*COOK, HORACE HERBERT	67, Poet's Road, Highbury, N.
4391	Oct. 1904	*COOK, THOMAS	District Estate Office, Great Western Railway, Bristol.
3212	Oct. 1897	*COOKE, FREDERICK ROPER	4, Quex Road, High Road, Kilburn, N.W.
2510	Nov. 1892	*COOKE, LIONEL	11, Queen Victoria Street, E.C.
6363	Oct. 1900	*COOKE-YARBOROUGH, ORFEUR FREDERIC	Frickley, Doncaster, Yorkshire.
5135	Oct. 1907	*COOPER, BERTIE	The Borough Surveyor's Office, Town Hall, Paddington, W.
4392	Oct. 1904	*COOPER, CECIL FRANCIS ADRIAN	Wootton, Northampton.
3367	Oct. 1898	*COPE, WILLIAM GEORGE	8, Orchard Street, Portman Square, W.
4393	Oct. 1904	*CORBLE, ARCHIBALD HARRISON ..	Langdale, Chase Side, Enfield, Middlesex.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1905	*CORFIELD, ARTHUR KING	Bradley Gate, Northenden, Cheshire.
Oct. 1903	*CORNWELL, WILLIAM JAMES	5, Douglas Street, Vickerstown, Barrow-in-Furness, Lancashire.
Oct. 1904	*COTCHING, GEORGE FREDERICK ..	26, Chapel Road, Worthing, Sussex.
Oct. 1903	*COTTAM, HARRY	Engineer's Office, Fylde Water Board, Barnacre, near Garstang, Lancashire.
Oct. 1908	*COVENTRY, BERNARD SETON ..	Survey Department, Colombo, Ceylon.
Oct. 1908	*COVERNTON, CHRISTOPHER ALAN	Rosherville, near Johannesburg, Transvaal.
Oct. 1895	*COWELL, HERBERT LEE	Central Chambers, Newquay, Cornwall.
Oct. 1908	*§COWELL, NORMAN	District Valuer's Office, 18 Holwood Road, Bromley, Kent.
Oct. 1905	*¶COWLEY, HERBERT REGINALD ..	132, High Street, Southend-on-Sea, Essex.
Feb. 1882	COWPER, RICHARD WILLIAM ..	81, High Street, Sittingbourne, Kent.
Oct. 1904	*COX, ARTHUR STANLEY	30, Porchester Road, Bournemouth.
Oct. 1905	*¶COX, DOUGLAS HAROLD	Wakefield, Ballard's Lane, North Finchley, N.
Oct. 1893	*COX, REGINALD JOHN	20, Preston Street, Brighton.
Oct. 1906	*COX, VICTOR JENNINGS	30, Doughty Street, Mecklenburgh Square, W.C.
Oct. 1907	*CRABB, ARTHUR HORACE	13, Borthwick Road, Stratford, E.
Oct. 1900	*CRAMPORN, CHARLES HUBERT ..	5, Raffles Place, Singapore.
Feb. 1909	*¶CRANFIELD, GUY WILLIAM ..	Bramley House, Enfield, Middlesex.
Oct. 1907	*¶CREASEY, JOHN ROGERS, JUN. ..	"Beltoft," Hadlow Road, Sidcup, Kent.
Oct. 1894	*CREGEEN, HUGH STOWELL, A.M.I.C.E.	Engineer's Department, South Eastern and Chatham Railway, London Bridge Station, S.E.
Mar. 1881	CRESSWELL, JOHN THEODORE ROSE	5, Great College Street, Westminster Abbey, S.W.
Oct. 1906	*CRIMES, FREDERIC CHARLES ..	Kidsgrove U.D.C., Surveyor's Office, Kidsgrove, Staffs.
Oct. 1908	*¶CROFT, CHRISTOPHER	The Elms, Dallington, Northampton.
Oct. 1899	*CROFT, GEORGE HERBERT	10, Sussex Square, Brighton.
Oct. 1910	*CROMIE, ROBERT	3, Cavendish Road, Clapham, S.W.
Oct. 1908	*CROOK, FELIX	3, Clarendon Avenue, Heaton Moor, Stockport, Cheshire.
Oct. 1899	*CROOK, HOLLIS AUGUSTUS ..	7, Harvard Road, Gunnersbury, W.
Oct. 1905	*CROSHER, WILLIAM SAMUEL ..	Haims, Hampstead Way, Hampstead Garden Suburb, N.W.
Oct. 1894	*CROSIER, CHARLES	2 Northumberland Avenue, Forest Hall, Newcastle-on-Tyne.
Oct. 1906	*CROSS, CLEMENT	18, Walbrook, E.C.
Oct. 1909	*CROSSLEY, THOMAS EDGAR ..	68, Tweedy Road, Bromley, Kent.
Oct. 1907	*¶CROW, FREDERICK LEWIS, JUN.	Shellwood Manor, Leigh, Surrey.
Oct. 1904	*CROWLEY, WALTER ST. LEGER ..	Mosley Chambers, 30, Mosley Street, Newcastle-upon-Tyne.

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3043	June 1896	*CROZIER, GEORGE FRANCIS ..	Land Agency Office, Ballinasloe, Co. Galway.
3814	Oct. 1901	*¶CRUMP, EDWARD HAROLD ..	Urban District Council Offices, Hinckley Leicestershire.
4153	Oct. 1903	*¶CRUMP, HAROLD	48, Narcissus Road, West Hampstead N.W.
5824	Feb. 1910	*CUBITT, ERNEST JAMES ..	8, Oxberry Avenue, Fulham, S.W.
4397	Oct. 1904	*¶CUBITT, HORACE WILLIAM, A.R.I.B.A. .. .	227 and 228, Strand, W.C.
537	Mar. 1879	CUDLIPP, WILLIAM	33, Poultry, E.C.
5428	Oct. 1903	*¶CULE, EDWARD IVOR	Aughton Chambers, 7, Moorfields, Liverpool.
4937	Oct. 1906	*CULME-SEYMOUR, ARTHUR GRANVILLE .. .	Glenville, Bitterne, Hants.
4154	Oct. 1903	*¶CULVER, HERBERT GEORGE ..	Heron House, Richmond, Surrey.
4861	Feb. 1906	*CULVERWELL, WALTER ..	Dwr Gwin, The Dale, Matlock Bath Derbyshire.
5142	Oct. 1907	*CUNNINGHAM, WILLIAM FRED-ERICK .. .	57, Albion Place, Reading.
5907	Oct. 1910	*CURTIS, EDWARD HERBERT ..	102, Balham Park Road, Wandsworth Common, S.W.
3216	Oct. 1897	*CUSHEN, CHARLES OSMON ..	17, Finsbury Circus, E.C.
4398	Oct. 1904	*CUTLER, FRANK SYDNEY ..	Town Hall, New Cross Road, S.E.
4938	Oct. 1906	*¶CUTLER, HENRY ISAAC ..	c/o B. F. Stratton, 36, Brandenburg Road, Chiswick. W.
5650	Oct. 1909	*CUTTS, EDWARD JAMES ..	42, Solon Road, Brixton, S.W.
5429	Oct. 1908	*DABBS, DOUGLAS WILLIAM ..	74, Stamford Hill, N.
3156	Feb. 1897	*DAFFORN, GEORGE BERTIE ..	25, High St., Wimbledon Common, S.W.
5651	Oct. 1909	*DAKERS, DAVID, JUN. ..	
3815	Oct. 1901	*DALE, EDWARD SYDNEY WILSON	28, High West Street, Dorchester.
4661	Oct. 1905	*DALLIMORE, NORMAN EDWARD ..	11, John Street, Crutched Friars, E.C.
4662	Oct. 1905	*DALZELL, WILLIAM DICKINSON ..	"Stoneleigh," Stanwix, Carlisle.
4663	Oct. 1905	*¶DAMPNEY, CYRIL JOHN ..	284, Camden Road, N.W.
3369	Oct. 1898	*DANCASTER, ARTHUR .. .	"Goodwin," Richmond Park, Bournemouth.
4664	Oct. 1905	*¶§DANNATT, PERCY BOOTHROYD ..	"Lyndale," Westcombe Park Road Blackheath, S.E., and 92, London Street, Greenwich, S.E.
5908	Oct. 1910	*DARLING, JOHN .. .	The Lodge, The Royal Infirmary, Perth
5825	Feb. 1910	*DARNELL, CHARLES TILLEY ..	Northfield Road, Blaby, near Leicester
5652	Oct. 1909	*¶DASH, ROYDON ENGLEFIELD ASHFORD .. .	Englefield, Oxshott, Surrey.
5909	Oct. 1910	*DASHWOOD, LIONEL ALBERT ..	The Hawthorns, Gnosall, Staffordshire
4400	Oct. 1904	*DAVENPORT, GILBERT CAPELL ..	Damerham, Salisbury.
4665	Oct. 1905	*DAVENPORT, HERBERT ..	8, Graemesdyke Avenue, East Sheen S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1904	*[DAVEY, JOHN	129, Church Lane, Old Charlton, Kent.
Oct. 1893	*DAVID, GEORGE WILLOUGHBY, B.A. (<i>Cantab.</i>)	Old Bank Chambers, 27, High Street, Cardiff.
Oct. 1902	*[DAVID, LEWIS WOOLLEY, B.A., (<i>Cantab.</i>)	Old Bank Chambers, 27, High Street, Cardiff.
Feb. 1908	*DAVIDSON, DAVID ALEXANDER ..	8, Manor Park Parade, Lee, S.E.
Oct. 1897	*DAVIDSON, RICHARD BRUCE ..	10, Hardshaw Street, St. Helen's, Lanca- shire.
Oct. 1907	*[DAVIES, EDWARD OWEN	"Dudbrook," Romford Road, Forest Gate, E.
Oct. 1907	*[DAVIES, FREDERICK WILLIAM ..	60, Manor Road, Bishopston, Bristol.
Oct. 1907	*DAVIES, HAROLD CLIFFE	Burn Lea, Beech Road, Woodhey, Rock Ferry, Cheshire.
Oct. 1899	*[DAVIES, JOHN WILLIAM SATTER- LEY HUMPHREYS	19, Northampton Place, Swansea.
Oct. 1903	*[DAVIES, LEONARD OWEN	11, Freeland Road, Ealing, W.
Oct. 1903	*[DAVIES, RHYS WILTSHIRE	737, Regent Circus, Swindon, Wiltshire.
Oct. 1907	*[DAVIES, WILLIAM GWYNNE BATCHELOR	Valuer's Office, King's Lynn, Norfolk.
Oct. 1906	*[DAVIS, ARTHUR HENRY	11, John Street, Crutched Friars, E.C.
Oct. 1908	*DAVIS, ARTHUR JAMES	Newton Park Estates Office, Newton St. Loe, Bristol.
Oct. 1906	*[DAVIS, CECIL WALLACE	33, Chalsey Road, Brockley, S.E.
Oct. 1907	*DAVIS, JOHN	Westfield, Gargrave, via Leeds, York- shire.
May 1891	*DAVIS, NEVILLE B., A.M.I.C.E. ..	Waterworks Office, Leicester.
Oct. 1910	*DAVIS, WILLIAM ARTHUR	16, St. John's Wood Road, N.W.
Feb. 1897	*DAVIS, WILLIAM HENRY HAROLD	2, York Row, Wisbech, Cambs.
Oct. 1910	*DAVISON, LOUIS JAMES	Goldsmiths' Company Estate Office, Acton Park, W.
Oct. 1910	*DAVSON, ALAN WARBURTON	42, Lansdowne Crescent, Notting Hill, W.
Oct. 1901	*DAVY, CLIFTON ROBERT	Trevena, Furze Platt, near Maidenhead, Berks.
Oct. 1908	*[DAW, HERBERT WARWICK	312, Brixton Hill, S.W.
Oct. 1902	*DAWKINS, ALBERT JAMES	31, Craven Street, Charing Cross, W.C.
Oct. 1907	*DAWSON, HENRY WALKER	19, Queen Street, Oldham, Lancs.
Oct. 1905	*[DAWSON, REGINALD	16, Cambridge Road, Barking, Essex.
Oct. 1907	*DAY, JOSEPH REYNOLDS	Thorpe Coombe, Forest Road, Waltham- stow, E.
Oct. 1910	*[DEAKIN, FRANCIS HENRY	Fieldhead, Wesley Park Road, Selly Oak, Birmingham.
Feb. 1905	*DEAN, EDWARD HAROLD	Town Hall, Shoreditch, E.C.
Oct. 1908	*DEANE, HARRY CUTHBERT, JUN.	Hazellhurst, Worcester Park, Surrey.
Oct. 1907	*DE CETTO, HENRY	Oakleigh, Chart Lane, Reigate, Surrey.
Oct. 1904	*DE LA CHEROIS, GEORGE LESLIE	Donaghadee, Co. Down.
Oct. 1910	*DELL, JOSEPH WILLIAMS	17, Wolseley Road, Godalming, Surrey.
Oct. 1902	*[DENSHAM, JOHN BOON	Foxley, Purley, Surrey.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4404	Oct. 1904	*DEWE, WALLACE	Knollsleigh, Henley-on-Thames, Oxfordshire.
5653	Oct. 1909	*DIBDIN, ROBERT JOHN	Nobles, Dormansland, East Grinstead, Sussex.
5654	Oct. 1909	*DICKIE, ALBERT GEORGE	15, High Road, Streatham, S.W.
5433	Oct. 1908	*DICKINS, BASIL	16, Harborough Road, Streatham, S.W.
5434	Oct. 1908	*DICKSON, ALFRED ERIC	30, Winckley Square, Preston, Lancs.
1528	Dec. 1888	*DIXON, FRANCIS EDWARD, A.M.I.C.E.	9, Bushell Place, Preston, Lancashire.
4405	Oct. 1904	*DIXON, FRANCIS EVELYN	54, King Edward Road, Hackney, N.E.
5435	Oct. 1908	*DIXON, ISAAC	End House, Garmoye Road, Liverpool.
5655	Oct. 1909	*DIXON, MYLES	Municipal Offices, Liverpool.
3819	Oct. 1901	*DODD, HAROLD JAMES	The Mount, Goring-on-Thames, Oxfordshire.
5915	Oct. 1910	*DODGSHON, EDMUND CHARLES . .	99, St. James's Road, Wandsworth Common, S.W.
4406	Oct. 1904	*DODGSON, EDWARD HUGHES . .	Derwent House, Cockermouth, Cumberland.
5656	Oct. 1909	*DONGER, WILLIAM JAMES	16, St. Cross Road, Winchester.
3221	Oct. 1897	*DOUGLAS, BERNARD MOXON . . .	14, Festing Grove, E. Southsea, Hants.
5916	Oct. 1910	*DOUGLAS, NORMAN	Claremont, Grove Hill, Middlesbrough, Yorks.
5436	Oct. 1908	*DOXAT-PRATT, BERNARD EDWIN	The Laurels, Cypress Road, South Norwood, S.E.
5657	Oct. 1909	*DRAKE, FRANCIS JOHN	Brockville House, Albion Street, Gloucester.
3983	Oct. 1902	*DRAKE, FRANK ARTHUR	9, Woodville Gardens, Ealing, W.
5658	Oct. 1909	*DREW, JOHN DENYS	15, Queen Street, Exeter.
5659	Oct. 1909	*DREW, STANLEY THOMAS	"Mayfield," Grove Park, Kent.
3222	Oct. 1897	*DREW, WALTER HUBERT	8, King's Mansions, Lawrence Street, Chelsea, S.W.
3820	Oct. 1901	*DRIVER, JOHN ROBERT FARRANT	18, Bennett's Hill, Birmingham.
2629	Feb. 1894	*DRUCE, EDRIC	County Agricultural Institute, Richmond, Aspley Guise S.O., Bedfordshire.
4941	Oct. 1906	*DUCK, GEORGE FRANCIS	Keston, Hayes, Kent.
4667	Oct. 1905	*DUCKWORTH, WALTER EDMUND	The Mart, Bridgwater, Somerset.
3673	Oct. 1900	*DUDLEY, ROLAND	Municipal Engineer's Office, Lahore, Punjab, India.
5353	Feb. 1908	*DUGGAN, CREIGHTON EDWARD . .	1810, 10th Avenue, Grand View, Vancouver, British Columbia.
5660	Oct. 1909	*DUKE, AUGUSTUS BARNABY CYRIL	"Maen," Dorchester.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1908	*DUKE, HENRY EDWARD	"Maen," Dorchester.
Oct. 1905	*DUNN, WILLIAM	97, Gresham Street, E.C.
Oct. 1906	*DUNLOP, CHARLES JOHN, M.R.I.A.I.	2, St. Andrew Street, Dublin.
Feb. 1900	*DUNT, JOHN HARLOW	Trelawne, Arragon Gardens, Streatham, S.W.
Oct. 1907	*DURANT, FREDERICK HENRY ..	59, Knotts' Green Road, Leyton. E.
Oct. 1908	*DURDEN, STANLEY JOHN	28, Woodville Road, Thornton Heath, Surrey.
Oct. 1908	*DUTTON, JOSEPH	"Comerford," Park Lane, Wallington, Surrey.
Oct. 1909	*DYER, FREDERICK	70, Lindley Street, Holgate, York.
Oct. 1904	*DUTTSON, RALPH CECIL	
Oct. 1910	*DYER, WILLIAM FANSTONE ..	14, Morden Road, Blackheath Park, Blackheath, S.E.
Oct. 1905	*DYKE, HAROLD GEORGE	The Buenos Ayres and Pacific Railway Company, Calle 25 De Mayo 277, Buenos Ayres, Argentine.
Oct. 1906	*DYKINS, PHILIP LLEWELLYN ..	Pendre, Holywell, Flintshire.
Oct. 1910	*EACHUS, CHARLES ALFRED EEDS	Hurstleigh, Bycullah Avenue, Enfield, Middlesex.
Oct. 1908	*EAMER, ALFRED STANLEY	27, Station Road, Watford, Herts.
Oct. 1908	*EAMES, HENRY PARSLOE	18, High Street, Barnet, Herts.
Oct. 1909	*EAMES, LEGH FAIRFAX	
Oct. 1905	*EASTMAN, ARCHIBALD GAREY ..	31, Walbrook, E.C.
Oct. 1893	*EASTON, WALTER JOHN	82, Twyford Avenue, Acton Hill, W.
Oct. 1908	*EATON, HAROLD	6, Gluman Gate, Chesterfield, Derbyshire.
Oct. 1907	*EATON, ROWLAND WYNNE	4, Shelton Road, Liscard, Cheshire.
Feb. 1911	*ECCLESHALL, GEORGE BENNETT	34, Bradford Terrace, Worsley Road, Farnworth, Lancashire.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
5919	Oct. 1910	*EDEN, FREDERICK STEWART ..	56, Sylvan Avenue, Wood Green, N.
3823	Oct. 1901	*EDGINGTON, WALTER, B.A. (Oxon.)	Nalder Hill, Newbury, Berks.
5354	Feb. 1908	*EDWARDS, GEORGE PERCY ..	14, Whyke Road, Chichester, Sussex.
5663	Oct. 1909	*EDWARDS, GEORGE WILLIAM ..	
4409	Oct. 1904	*EDWARDS, JOHN PERCIVAL ..	Glenvale, Cromwell Road, Beckenham, Kent.
5920	Oct. 1910	*EDWARDS, SIDNEY ALBERT ..	6, Ely Place, Dublin.
4410	Oct. 1904	*EDWARDS, SPENCER	11, Cross Street, Barnstaple, Devonshire.
5921	Oct. 1910	*EDWARDS, THOMAS HENRY ..	181, Auckland Hill, West Norwood, S.E.
5079	Feb. 1907	*EDWARDS, THOMAS JAMES ..	Poole House, Clee Hill, near Ludlow, Shropshire.
4160	Oct. 1903	*EGREMONT, JOHN	Dartington Estate Office, Totnes, Devonshire.
5826	Feb. 1910	*EILOART, CYRIL HOWARD ..	40, Chancery Lane, W.C.
4583	Feb. 1905	*EILOART, FERDINAND ROBERT ..	40, Chancery Lane, W.C.
3987	Oct. 1902	*ELGAR, CHARLES JOHN	Crockshard, Wingham, near Dover, Kent.
2580	Oct. 1893	*ELGAR, WALTER ROBINSON ..	Hillside, Sittingbourne, Kent.
4672	Oct. 1905	*ELLEN, FREDERICK CHARLES GROOME	Eastfield House, Andover, Hampshire.
3824	Oct. 1901	*ELLIOTT, JOHN WILLIAM FARRANT	1, Holland Road, Hove, Brighton.
3825	Oct. 1901	*ELLIS, ARTHUR ORANGE	70, St. Aubyn Street, Devonport.
4673	Oct. 1905	*ELLIS, CHARLES EVELYN	Brookside, Bush Hill Park, Enfield, Middlesex.
5153	Oct. 1907	*ELLIS, GEORGE EDWARD	1, Lithos Road, South Hampstead, N.
5154	Oct. 1907	*ELLIS, RAE ADAM	45, Fenchurch Street, E.C.
4411	Oct. 1904	*ELLYATT, GEORGE FREDERICK ..	White Croft, East Dulwich Grove, S.E.
4945	Oct. 1906	*ELMES, FREDERICK LANSELL ..	Priory Chambers, Cromer, Norfolk.
5444	Oct. 1908	*ELSWORTHY, JOHN GORDON ..	17, Ardilaun Road, Highbury, N.
5664	Oct. 1909	*ELWELL, LAURENCE VIVIAN ..	Estate Office, Midland Railway Derby.
4674	Oct. 1905	*EMERY, DOUGLAS WADE	Valuer's Department, 47 High Street, Bedford.
4584	Feb. 1905	*EMSLIE, BENJAMIN LESLIE ..	The Dominion Agricultural Offices the Potash Syndicate, 1102-110 Temple Building, Toronto, Ontario.
5922	Oct. 1910	*ENGLISH, HARRY EDWIN	78, Victoria Park Road, South Hackney, N.E.
4675	Oct. 1905	*ENGLISH, HENRY CECIL	P.O. Box, 1490, Johannesburg, B.S.A.
5155	Oct. 1907	*ENTWISTLE, CHARLES CAR- RUTHERS	Southgarth, Buxton Road, Chinley, Derbyshire.
4412	Oct. 1904	*ERMEN, CUTHBERT EMIL ALBERT	c/o F. Ermen, Milton House, Gargrave, Leeds, and Borneo.
4585	Feb. 1905	*ERMIRICH, HENRY	55, Beatrice Avenue, Norbury, S.W.
5827	Feb. 1910	*ESCOLME, JOHN	Moss House, Morecambe, Lancs.
4676	Oct. 1905	*EVANS, BERTIE GRAHAM	Tremel, Arthur Road, Wimbledon Park, S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1903	*EVANS, CHARLES STOKES EATON	Delmé-Radcliffe Estate Office, Titchfield, Hampshire
Feb. 1909	*EVANS, EDWARD ARTHUR... ..	Frondeg, Carnarvon.
Oct. 1905	*EVANS, EDWIN DUDLEY	Ravenslea, Nightingale Lane, Wandsworth Common, S.W.
Oct. 1907	*EVANS, HENRY MONTAGUE.. ..	City Engineer's Department, City Hall, Cardiff.
Feb. 1911	*EVANS, MONTAGU	253, Lavender Hill, S.W.
Oct. 1900	*EVANS, RUPERT MAURICE.. ..	Bank House, Stafford.
Oct. 1904	*EVERARD, BERNARD	6, Millstone Lane, Leicester.
Nov. 1892	*EVERED, GILLIEBRAND ELWIN..	117, Old Christchurch Road, Bourne mouth.
Nov. 1892	*EVERETT, ARTHUR SHERMAN ..	14, Victoria Street, S.W.
Oct. 1909	*EWEN, REGINALD MALCOLM ..	22, Walbrook, E.C.
Feb. 1908	*EWIN, HENRY HAMILTON	Messrs. Lowe, Goldschmid and Howland, Heath Street, Hampstead, N.W.
Oct. 1904	*EYLES, CHARLES HENRY	19, Charing Cross Road, W.C.
Oct. 1908	*FAIRMINER, WILLIAM JAMES ..	41, Burghley Road, Highgate Road, N.W.
Oct. 1905	*FAIRWEATHER, NORMAN BLUMER	40, Christchurch Road, Streatham Hill, S.W.
Oct. 1908	*FALKNER, FRANK NINUS	16, Great Marlborough Street, W.
Oct. 1907	*FARRER, JOHN CAMPLIN	2, Coleman Street, E.C.
Oct. 1904	*FARTHING, CHARLES HAROLD ..	6, Station Yard, Twickenham, Middlesex.
Oct. 1904	*FARWELL, EVELYN WOOD	11, Laura Place, Bath, Somersetshire.
Oct. 1910	*FAYERMAN, ALEC GEORGE PERCY	Hillside, Kenilworth, Warwickshire.
Oct. 1905	*FELTHAM, ARTHUR WILLIAM ..	Clovelly, Upper Fant Road, Maidstone.
Oct. 1903	*FENNING, JOHN HENRY	38, Alexandra Road, Bedford.
Oct. 1909	*FENSOM, REGINALD ROBERT ..	Masonic Buildings, Little Park Street, Coventry, Warwickshire.
Oct. 1910	*FENTUM, CHARLES ALFRED	52, Alexandra Road, Upper Norwood, S.E.
Oct. 1904	*FERRIS, GEORGE WILLIAM.. ..	64, Gladstone Road Chester.
Feb. 1881	FEW, HARRY GARRARD	Haversham House, Putney, S.W.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
3827	Oct. 1901	*FIELD, LEONARD MARTIN	20, Linden Grove, Gosport, Hants.
5925	Oct. 1910	*FIELD, VICTOR	Whitehall, Longbridge Road, Barkin Essex.
5356	Feb. 1908	*FIELDING, ARTHUR EDWARD BRUCE	163A. Strand, W.C.
5447	Oct. 1908	*FIELDING, KENNETH HUBERT ..	3, Redwell Street, Norwich.
4681	Oct. 1905	*FIFE, JAMES DONALD	Seaview, Seaview Road, Leigh-on-Sea S.O., Essex.
2668	Oct. 1894	*FINCH, CLEMENT ROBERT	Towerfield, Clarendon Road, Watfor Herts.
4418	Oct. 1904	*FINCH, GEORGE FREDERICK ..	7, Crouch Hall Road, Crouch End,
4948	Oct. 1906	*FISHER, EDWARD HUMBERT ..	Church Farm, Desborough, Market Ha borough, Leicestershire.
5667	Oct. 1909	*FISHER, EDWIN GRAINGER ..	23, Lyndewode Road, Cambridge.
3093	Oct. 1896	*FISHER, ROBERT	10, Fairlight Avenue, Harlesden, N.W.
4683	Oct. 1905	*FISHER, THOMAS ROTELY	41, Everton Road, Yeovil, Somerset.
4684	Oct. 1905	*FITCH, PHILIP	Engineer's Department, 299, Bal Mitre, Buenos Aires, South America
4419	Oct. 1904	*FITCH, SIDNEY	District Valuer's Office, High Wycom Buckinghamshire.
1123	Mar. 1884	FITNESS, JOHN FRANCIS	80, Cheapside, E.C.
4165	Oct. 1903	*FLATT, JOHN ALEXANDER	Rating Department, Guildhall, E.C.
5926	Oct. 1910	*FLEMING, HERBERT SIDNEY ..	52, Leyland Road, Lee, S.E.
1916	Apr. 1883	FLETCHER, GEORGE RIVERS ..	2, Basinghall Street, E.C.
5449	Oct. 1908	*FLINT, WILLIAM FIELDER	Eastnor, Avenue Rise, Bushey, Herts
5927	Oct. 1910	*FLOYD, ARTHUR NOEL	"Rydal Mount," Handsworth Woo Birmingham.
4685	Oct. 1905	*FOGG, THOMAS HOLT	7, Market Place, Chippenham, Wil shire.
4949	Oct. 1906	*FOLL, WALLACE ARTHUR	Woburn Sands and Toddington, Beds and Bletchley and Newport Pagne Bucks.
5928	Oct. 1910	*FOLLAND, GORDON RADMORE ..	8, Fort Terrace, Barnstaple, Devon.
3989	Oct. 1902	*FORD, C. GRAHAM	Metropolitan Asylums Board, Emban ment, E.C.
4050	Oct. 1906	*FORD, RICHARD DICKINS LANCELOT	43, Huron Road, Upper Tooting, S.W.
5828	Feb. 1910	*FORGE, RAYMOND JAMES	Cromwell Lodge, Twickenham, S.W.
1888	Nov. 1890	*FORREST, WILLIAM	Windsor Estate Office, St. Fagan Cardiff.
4686	Oct. 1905	*FORTUNE, SIDNEY HERBERT ..	Valuers' Department, Shannon Cour Bristol.
5158	Oct. 1907	*FOSKETT, HENRY	50, Seymour Gardens, Ilford, Essex.
4045	June 1896	*FOSTER, EDWARD CHARLES ..	54, Pall Mall, S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1905	*FOSTER, GAIUS	Architect's Department, London County Council, Spring Gardens, S.W.
Oct. 1898	*FOSTER, HENRY HELM	186, Balham High Road, S.W.
Oct. 1909	*FOSTER, HENRY OSWALD	Newton House, Loughton, Essex.
Oct. 1910	*FOSTER, NORMAN BEAUMONT	"Northridge," Ampthill, Beds.
Oct. 1900	*FOSTER, WALTER	54, Pall Mall, S.W.
Oct. 1901	*FOSTER, WILLIAM ARTHUR	Valuers' Department, Richmond Chambers, Blackburn, Lancashire.
Oct. 1908	*FOSTER, WILLIAM FREDERICK	268, Tottenham Court Road, W.
Oct. 1900	*FOSTER, WILLIAM HOWARD	Queen's Bay, Kortenay Lake, British Columbia.
Oct. 1904	*FOULIS, ARCHIBALD KEITH	Roselea, Motherwell N.B.
Oct. 1905	*FOWLER, CHARLES K.	Rosslare, Sligo.
Oct. 1902	*FOWLER, CYRIL JAMES	140, Norwood Road, S.E.
Oct. 1907	*FOWLER, FRANK ARCHIBALD	6, Alderbrook Road, Clapham Common, S.W.
Oct. 1910	*FOX, JOHN HARPER GRAHAM	Wyndale, Belgrave Parade, Newcastle-on-Tyne.
Oct. 1904	*FRANCE, ARTHUR STANLEY	63, Newington Butts, S.E.
Oct. 1906	*FRANCIS, BERNARD	National Benefit Trust, Ltd., 10, Finsbury Square, E.C.
Feb. 1902	*FRANCIS, RONALD GARNHAM	103, Hill's Road Cambridge
Oct. 1909	*FRANCIS, THOMAS JOHN PHILIP	Valuer's Department, King's Lynn, Norfolk.
Oct. 1906	*FRANK, THOMAS PEIRSON, A.M.I.C.E.	Town Hall, Ripon, Yorkshire.
Oct. 1906	*FRANKLIN, HERBERT JOHN	5, Risingholme Villas, High Road Wealdstone, Middlesex.
Oct. 1910	*FREEMAN, DUDLEY SEARLE	Waterlake, Chiddingstone, Kent.
Oct. 1899	*FREEMAN, GEORGE	Kenmure, Spencer Hill, Wimbledon, S.W.
Oct. 1903	*FRENCH, ARTHUR MARTIN	
Oct. 1900	*FREUER, WILLIAM SAMUEL	Great Massingham, King's Lynn, Norfolk.
Feb. 1902	*FROST, ALFRED CARDAIN	Station Approach, Gerrards Cross Station, Bucks.
Feb. 1882	FURBER, HENRY AUBREY	3, Warwick Court, Gray's Inn, W.C.
Oct. 1902	*GAHAN, ROBERT BERESFORD	Smithstown House, Castlecomer, Co. Kilkenny.
Oct. 1904	*GALE, HAROLD JAMES	Market Place, Wallingford, Berkshire.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4954	Oct. 1906	*GALE, LEONARD FRANKLIN ..	Market Place, Wallingford, Berkshire.
1693	Jan. 1890	*GALSWORTHY, VINCENT SOMERS ..	29, Fleet Street, E.C.
5670	Oct. 1909	*GAMBELL, PHILIP CLAYTON ..	83 High Street, Newport Pagnell, Bucks.
5932	Oct. 1910	*GANDY, ROBERT NEWTON ..	The Hollies, Acton Bridge, Cheshire.
4690	Oct. 1905	*GARDNER, JAMES	29, Grosvenor Road, Richmond, Surrey.
5160	Oct. 1907	*GARDNER, PAUL SILVESTER ..	1, York Gate, Regent's Park, N.W.
4691	Oct. 1905	*GARNHAM, EDWIN ALFRED VICKERY	2, Sheepcote Road, Harrow Middlesex.
2670	Oct. 1894	*GARRETT, ARTHUR BERRY ..	42, Poultry, E.C.
702	Jan. 1882	GARROD, HERBERT JAMES ..	Cheveley, Newmarket, Cambridgeshire.
5451	Oct. 1908	*GATES, ERNEST HARRY ..	49, Leander Road, London Road, Throton Heath, Surrey.
4955	Oct. 1906	*GAWITH, HARRISON	12, St. John's Lane, Liverpool.
5161	Oct. 1907	*GAY, FRANK	Eastbrook End, Romford, Essex.
4425	Oct. 1904	*GEE, FREDERIC GEORGE ..	37, St. John's Road, Ipswich.
4169	Oct. 1903	*GENDERS, PERCY ROBERT ..	c/o R. J. Lecky, Northern Buildings, Regina, Saskatchewan, Canada.
5162	Oct. 1907	*GEORGE, FREDERICK ALBERT ..	City Surveyor's Office, Guildhall, E.C.
5933	Oct. 1910	*GERRARD, GEORGE	34, Bettridge Road, Fulham, S.W.
3833	Oct. 1901	*GETTINGS, SYDNEY SALTER, A.M.I.C.E.	Resident Engineer's Office, Sewerage Works, Tring, Hertfordshire.
5163	Oct. 1907	*GIBBINGS, THOMAS STANLEY ..	Warsash, near Southampton.
4692	Oct. 1905	*GIBSON, ALAN KEITH	Balls Park Estate Office, Jenningsbury, Hertford.
4693	Oct. 1905	*GIBSON, ALEXANDER WILLIAM ..	7, Warwick Place, Worthing, and Railway Approach, Worthing, Sussex.
4956	Oct. 1906	*GIBSON, FRANK SPEEDING ..	13, Drayton Green Road, W. Ealing.
4957	Oct. 1906	*GIFFIN, CHARLES WILLIAMS ..	Stotfold, Baldock, S.O., Hertfordshire.
5452	Oct. 1908	*GIFFORD, EGMONT AUGUSTUS ..	Cornwalls, Tennison Road, South Norwood, S.E.
2671	Oct. 1894	*GILBERT, JOHN SAINSBURY ..	70, Queen Street, Cheapside, E.C.
4303	Feb. 1904	*GILBERT, SAMUEL HOWELL ..	Messrs. Norton, Trist, and Gilbert, 70, Queen Street, Cheapside, E.C.
5164	Oct. 1907	*GILBERT-LODGE, LEICESTER JAMES GARFIELD	46, Perham Road, W. Kensington.
5671	Oct. 1909	*GILBEY, PERCY HAMMOND ..	403, High Road, Ilford, Essex.
4694	Oct. 1905	*GILKS, STEPHEN LANGTON CLOWES	9, Carlton Road, Putney, S.W.
4958	Oct. 1906	*GILL, WILLIAM PHILIP	35, Stanford Road, Brighton.
5934	Oct. 1910	*GILLETT, EDWARD BAILEY ..	Colyton, Leigham Court Road, Streatham, S.W.
5453	Oct. 1908	*GIMSON, MARTIN	White House, Clarendon Park, Leicester.
5672	Oct. 1909	*GINGELL, JOHN TAYLOR	Elmwood, Epping, Essex.
5454	Oct. 1908	*GIRVEN, FREDERICK WILLIAM ..	15, Clarence Road, Wimbledon, S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1901	*GLEED, HERBERT ALEXANDER..	8 and 9, Martin's Lane, Cannon Street, E.C.
Oct. 1905	*|| GLENN, GEORGE FREDERICK ..	42, Poultry, E.C., and West Byfleet, Surrey.
Oct. 1898	*GOADBY, JOSEPH STUBBINS ..	London County Council, 9, Spring Gardens, S.W.
Oct. 1907	*|| GODDARD, FREDERICK BROKEN-SHIRE, A.M.I.C.E.	9, Hazlewell Road, Putney, S.W.
Oct. 1910	*GODDARD, HENRY GEORGE FREDERICK	14, Hammet Street, Taunton.
Oct. 1910	*|| GODFREY-PAYTON, ARTHUR ..	Bridge House, Warwick.
Oct. 1908	*|| GODFREY-PAYTON, WALTER ..	The Bridge House, Warwick.
Oct. 1908	*GODWIN, CHARLES FISHER..	Ravenscroft, All Saints' Road, Newmarket, Cambridgeshire.
Feb. 1907	*GODWIN - AUSTEN, ROBERT ANNESLEY	Messrs. Beck and Ellis, High Street, Great Missenden, Bucks.
Oct. 1906	*GOFF, WILLIAM SETTEN ..	234, High Street, Swansea.
Oct. 1909	*GOODALL, ERIC WILLIAM ALDRICH	Hardy Grange, Eldwick, Bingley, Yorkshire.
Oct. 1903	*|| GOODWIN, HENRY ERNEST..	40, Erlanger Road, New Cross, S.E.
Oct. 1903	*GOODWIN, PERCY WORTHINGTON	St. Andrew's Colonial Homes, Kalimpong, Bengal, India.
Oct. 1903	*GORE, GEORGE PYM ..	81, Bondgate, Darlington, Durham.
May 1883	*GORE, WILLIAM JOLL..	205, Wardour Street, W.
Oct. 1909	*|| GOSNEY, STANLEY HARRY..	44, Addiscombe Road, Croydon.
Oct. 1904	*|| GOTELEE, GUY STANLEY ..	20, Mill Street, Bedford.
Oct. 1910	*GOTT, RALPH EDGAR ..	"Brookfield," Park Grove, Frizinghall, Bradford, Yorkshire.
Oct. 1907	*GOULD, GEORGE HARRY BERTRAM	9, Tower Street, Ipswich.
Oct. 1901	*GOULD, HARMER ..	16, Grove Parade, High Road, East Finchley, N.
Oct. 1908	*GOULDER, ARTHUR CHRISTOPHER	21, Rutland Park, Cricklewood, N.W.
Oct. 1905	*|| GOWING, CHARLES TOWLER ..	White Hall, Sprowston, Norwich.
Oct. 1905	*GOWLLAND, STEPHEN LEVERSHA	17, Tunley Road, Upper Tooting, S.W.
Oct. 1910	*|| GRACE, EDWARD NATHANIEL ..	Kendalls Building Estate Office, Radlett, Herts.
Oct. 1905	*|| GRAHAM, HENRY CECIL ..	5, Great College Street, Westminster Abbey, S.W.
Oct. 1910	*GRAIN, HENRY HERBERT BRETT	66, St. Andrew's Street, Cambridge.
Feb. 1908	*GRAIN, PETER BOVILL..	66, St. Andrew's Street, Cambridge.
Oct. 1906	*GRANT, JOHN YATES ..	Crown House, Newport, Essex.
Dec. 1889	*GRANT, JOSEPH ..	16, Addiscombe Road, Croydon.
Oct. 1910	* GRANT, LESLIE THOMAS ..	Lornesta, Kersfield Road, Putney Hill, S.W.

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5676	Oct. 1909	*† GRAY, JOHN VINCENT	10, Brent Road, Shooter's Hill, Woolwich Kent.
2583	Oct. 1893	* GRAY, PERCY WILLIAM	29, St. Andrew's Street, Cambridge.
4700	Oct. 1905	*† GRAY, WILLIAM EDWARD	4, St. Margaret Street, Canterbury.
1012	Dec. 1883	GREEN, JAMES HENRY TOWN- SEND	22, Chancery Lane, W.C.
1418	Dec. 1887	* GREEN, THOMAS JOHN	13, King Street, Maidstone.
5677	Oct. 1900	* GREENAWAY, JOSEPH REGINALD	10, Southcote Road, Reading.
3097	Oct. 1896	* GREENFIELD, FREDERICK JAMES	Point Loma Homestead, Point Loma California, U.S.A.
1230	Dec. 1884	* GREENOP, EDWARD, A.R.I.B.A. ..	Falcon Court, 32, Fleet Street, E.C.
5041	Oct. 1910	* GREENOUGH, HARRY	2, Northfield Terrace, Wibsey, Bradford Yorkshire.
5230	Oct. 1897	* GREENWOOD, ERNEST	360, High Road, Chiswick, W.
6112	Feb. 1911	* GREENWOOD, JOSEPH	4, Drill Street, Keighley, Yorkshire.
5042	Oct. 1910	* GREGORY, CHARLES HENRY	47, New Fillebrook Road, Leytonston Essex.
4962	Oct. 1906	*† GRELLIER, GORDON HARLEY ..	6, Queen Anne's Gate, Westminster S.W., and Epsom, Surrey.
5163	Oct. 1907	*† GREY, GEORGE WILLIS	48, Cranbourn Street, W.C.
4175	Oct. 1903	* GRIERSON, JOHN CAMPBELL ..	Carperby, Mount Wood, Prenton Hill Cheshire.
5678	Oct. 1903	*† GRIFFIN, HAROLD, JUN.	54, High Street, Battersea, S.W.
5679	Oct. 1909	* GRIFFITH, FRANK STANLEY	3, Wellfield Avenue, Muswell Hill, N.
5458	Oct. 1908	* GRIFFITHS, CHARLES HENRY WILLIAM	Seaward, Exmouth, Devon.
2522	Nov. 1892	* GRIGGS, HENRY JENNER, A.R.I.B.A.	Metropolitan Bank Chambers, New port, Monmouthshire.
1076	Jan. 1884	GRIMWADE, HENRY	Colchester, Essex.
5943	Oct. 1910	* GRIPPER, EDWARD CUTBUSH ..	54, Aston Street, Oxford.
4428	Oct. 1904	*† GRIPPER, JOHN BELL	143, Cannon Street, E.C.
5680	Oct. 1909	*† GROGAN, HAROLD KEITH	8, Sydenham Hill, S.E.
5944	Oct. 1910	* GROGAN, RICHARD LAWRENCE REMY	57, Edith Road, West Kensington, V
5681	Oct. 1909	* GROSER, ARTHUR HUGH	6, Ely Place, Dublin.
5945	Oct. 1910	* GROUT, PERRY	12, St. Paul's Chambers, Ludgate Hill E.C.
3686	Oct. 1900	* GROVE, RICHARD THOMAS	Lincluden, Beaumont Road, Wimbled Park, S.W.
5682	Oct. 1909	* GROVER, LUKE MONTAGU	Public Works Department, Perth W. Australia
5683	Oct. 1909	* GUDE, CHARLES, JUN.	Messrs. Crawter, Cheshunt, Herts.
5052	Feb. 1907	*† GUMBRELL, LEONARD BARTON ..	87, Holmesdale Road, Hampton Wick Middlesex.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Feb. 1900	*GURNEY, RONALD GEORGE ..	Ledbury Rural District Council, Ledbury, Herefordshire.
Oct. 1910	*GURNEY, SIDNEY JOHN	39, Kingsbury Road, Gravelly Hill, Birmingham.
Oct. 1905	*HAGGER, ALBERT JAMES	12, Vale Road, Bournemouth.
Oct. 1903	*HAGGER, GEORGE JOHN	Railway Approach, Worthing, Sussex.
Oct. 1901	*HAINES, ALFRED HUBERT JESTON	The Agricultural College, Wye, Kent.
Oct. 1902	*HALE, FRANCIS EDWARD	52, Fisherton Street Salisbury.
May 1884	HALL, CHARLES PELL (<i>Professional Associate of Council</i>) ..	Park Farm Office, Woburn, Beds.
Oct. 1899	*HALL, JOHN SEBASTIAN	General Valuation Office, Dublin.
Oct. 1903	*HALL, MONTAGUE PRESTON	38, Chancery Lane, W.C.
Oct. 1910	*HALL, RODERICK GLENDINNING	84, Victoria Drive, Eastbourne.
Oct. 1910	*HALL, SIDNEY	15, Alexandra Villas, Finsbury Park, N.
Oct. 1895	*HALL, THOMAS BIDDLE	Hoxne, near Eye, Suffolk.
Oct. 1904	*HALL, VERNON MANNING	33, Heber Road, Willesden Green, N.W.
Oct. 1905	*HALLAM, FRANK VINCENT	86, Loraine Mansions, Holloway, N.
Oct. 1907	*HALLIDAY, GEORGE ARTHUR ..	4, Goodmayes Avenue, Goodmayes, Essex.
Oct. 1908	*HALLS, CHRISTOPHER WALTER ..	7, Arden Villas, Long Lane, Finchley, N.
Oct. 1907	*HALSE, SIDNEY JOSEPH	13, Yuen Ming Road, Shanghai.
Feb. 1882	HAMILTON, JOHN PAYNTER	64 and 65, Coleman Street, E.C.
Oct. 1907	*HAMLIN, ERIC HENLEY	1, Bookham Street, Hoxton, N.
Oct. 1909	*HAMLIN, JACK	Rivermead, Bray, Berks.
Oct. 1910	HAMMOND, GEORGE ADDISON	136, Brownhill Road, Catford, S.E.
Oct. 1910	*HAMMOND, JOHN BERNARD	9, Norville Terrace, Headingley, Leeds.
Oct. 1900	*HANCOCK, HENRY SYDNEY, JUN.	Sydney Place, St. Austell, Cornwall.
Nov. 1892	*HANKINSON, FRANCIS HENRY ..	Richmond Chambers, Bournemouth.
Oct. 1907	*HANNON, JOHN MICHAEL	9, Spring Gardens, S.W.
Oct. 1894	*HARDIMAN, HARRY	59, Mount Pleasant Road, Hastings, Sussex.
Oct. 1904	*HARDING, CHARLES REGINALD ..	County Land Agent's Office, County Council Buildings, Newport and Inglefield, Llanthwy Road, Newport, Mon.
Dec. 1887	*HARDING, FREDERICK ALLCROFT	Willis's Rooms, King Street, St. James' Square, S.W.
Oct. 1904	*HARDS, JOHN FREDERICK STANLEY	Sanctuary House, Westminster, S.W.
Oct. 1895	*HARDWICK, ARTHUR JESSOP ..	Eagle Chambers, Kingston-on-Thames, Surrey.
Oct. 1909	*HARDY, ERNEST CARLISLE	8, Hartswood Road, Shepherd's Bush, W.
Feb. 1907	*HARGREAVES, LEOPOLD REGINALD, B.A.	Cuffnells, Lyndhurst, Hampshire.
Oct. 1900	*HARLOW, WILLIAM WYATT RIDGWAY, A.M.I.C.E.	City Surveyor's Office, Carlisle.

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5174	Oct. 1907	*HARMER, ERNEST FREDERICK ..	Messrs. Weston and Burnett, 24, Portland Street, Southampton.
5688	Oct. 1909	*HARPUR, FRED.	6 and 7, St. John's Square, Cardiff.
5950	Oct. 1910	*HARRIS, CHARLES FRANCIS NORMAN	22, Carlton Road, Putney, S.W.
3839	Oct. 1901	*HARRIS, DOUGLAS	8, Duke Street, Adelphi, W.C.
4705	Oct. 1905	*HARRIS, EDWARD CHARLES	39, Bloomsbury Square, W.C.
5689	Oct. 1909	*HARRIS, HORACE SAMUEL	"Ronietta," St. James' Road, Sutton Surrey.
2959	Oct. 1895	*HARRISON, ARTHUR	69 and 70, High Street, Stockton-on-Tees, Durham.
2960	Oct. 1895	*HARRISON, CYRIL H. GILMORE	
3840	Oct. 1901	*HARRISON, ERNEST	Hill Top, Bolton-le-Sands, near Carlisle, Lancashire.
4707	Oct. 1905	*HARRISON, HAMILTON PAYN	Government Survey Department, Colombo, Ceylon.
3311	Feb. 1898	*HARRISON, HENRY BEAUCHAMP	Sutton Benger, Chippenham, Wilts.
5951	Oct. 1910	*HARRISON, MICHAEL MATTINSON	Elms Farm, Whitefield, nr. Manchester.
5084	Feb. 1907	*HARRISON, PERCY WALTON	Henford House, Yeovil, Somerset.
4183	Oct. 1903	*HARRISON, WILLIAM	11, Little College Street, Westminster, S.W.
5462	Oct. 1908	*HART, HERBERT EDWARD	Debden Road, Saffron Walden, Essex.
5463	Oct. 1908	*HARTFREE, GEORGE BERTRAM	District Council Office, Alton, Hants.
2961	Oct. 1895	*HARVEY, FREDERICK CHARLES	1, Frithknowle Villas, Brockhurst Road, Gosport, Hampshire.
5952	Oct. 1910	*HARVEY, JAMES MOREWOOD	Creglorne, Londonderry.
5953	Oct. 1910	*HARVEY, WILLIAM RHYS	509, Alder Street, Missoula, Montana, U.S.A.
4708	Oct. 1905	*HASLEHUST, ERIC THOMASSET	Manor Office, Yealmpton, S. Devon.
3380	Oct. 1898	*HASSETT, REGINALD CHARLES	42, High Road, Kilburn, N.W.
5690	Oct. 1909	*HATT, WALTER	66, Duke Street, Chelmsford.
5691	Oct. 1909	*HATTON, JOHN DOUGLAS	Messrs Hall & Steavenson, College Hill, Shrewsbury.
2585	Oct. 1893	*HAWES, FREDERICK KIRK	The Elms, Lowthorpe, Driffield, Yorkshire.
4435	Oct. 1904	*HAWKE, ROLAND WELSTEAD	Valuer's Office, 59 and 60, West Stowell Street, Colchester.
4184	Oct. 1903	*HAWKINS, EDWARD ROBINSON	Downham Market, Norfolk.
4185	Oct. 1903	*HAY, PERCY GILBERT	Totdam, Clifton Road, Wallington Surrey.
6113	Feb. 1911	*HAY, WILLIAM GEORGE	27, Oakley Square, N.W.
5692	Oct. 1909	*HAYBITTLE, RICHARD WILLIAM	23, Dorset Road, Ealing, W.
5175	Oct. 1907	*HAYES, FREDERICK PERCY	The Thornes, New Road, Chesham, Bucks.
4186	Oct. 1903	*HAYLLAR, SIDNEY HAYLLAR	Stevenage, Herts.
4710	Oct. 1905	*HAYTON, JAMES DAWSON WRAY	22, Muswell Rise, Muswell Hill, N.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1901	*HAYWARD, ARTHUR BALDWIN ..	14, John Street, Adelphi, W.C.
Oct. 1905	*HAYWARD, ARTHUR LATEWOOD ..	16, Lew Road, Rochester Kent.
Oct. 1904	*HAYWARD, JOSEPH	Branksome, Chandler's Ford, Hampshire
Oct. 1909	*HAYWARD, WILLIAM HANSELL ..	7, Eastern Road, Romford, Essex.
Oct. 1895	*HAYWOOD, SAMUEL SPENCER ..	Borough Engineer's Office, Brighouse, Yorkshire.
Oct. 1904	*HAZLETT, JOHN JOSEPH	Estate Commission Office, Upper Merion Street, Dublin.
Oct. 1897	*HEAD, WILLIAM ALFRED	43 and 45, Durham Street, Vauxhall, S.W.
Oct. 1909	*HEALD, HARRY MAIR	
Oct. 1907	*HEALY, HARRY PRINCE	3, Bodney Road, Hackney, N.E.
Oct. 1904	*HEARD, ROBERT CHARLES	Canadian Pacific Railway, Irrigation Department, Calgary, Alberta, Canada.
Oct. 1907	*HEATH, SIDNEY HOWARD	Dacre House, 5, Arundel Street, Strand, W.C.
Oct. 1910	*HEATON, HERBERT	Surveyor's Department, Town Hall, Manchester.
Dec. 1885	*HEBBLETHWAITE, CHAS. HENRY	10, Waterhouse St., Halifax, Yorkshire.
Oct. 1901	*HEBDEN, FRANCIS RADCLIFFE ..	Valuer's Department, Inland Revenue, Shoot-up-Hill, Cricklewood, N.W.
Dec. 1883	HEBDEN, GEORGE RADCLIFFE ..	4, Churchfield Road, East Acton, W.
Oct. 1894	*HECKFORD, HARLEY	Surveyors' Department, Council Offices, High Street, Poplar, E.
Dec. 1880	HEDGER, ARTHUR CONSTANTINE	44, Charing Cross, S.W.
Oct. 1910	*HEDLEY, REGINALD THOMAS	
	FENWICK	31a, Colmore Row, Birmingham.
Oct. 1907	*HEDLEY, THEODORE FENWICK ..	1, Elms West, Sunderland, Co. Durham.
Oct. 1910	*HEELAS, RAYMOND JOHN	The Manor House, Earley, Reading.
Oct. 1907	*HEELEY, JOE	Estate Department, Euston Station, N.W.
Nov. 1892	*HELICAR, GEORGE THOMAS ..	80, Osbaldeston Rd., Stoke Newington, N.
Oct. 1910	*HENDERSON, JOHN ALEXANDER	Casslands, Woodfield Road, Tonbridge, Kent.
Oct. 1910	*HENDERSON, PERCY CHARLES ..	90, North Side, Clapham Common, S.W.
Oct. 1907	*HENDERSON, REGINALD ALFRED	15, Randall Road, Clifton, Bristol.
Jan. 1887	*HENDERSON, RICHARD	Portland Estate Office, Kilmarnock.
Oct. 1905	*HENDRA, ALBERT JOHN	London County Council, 9, Spring Gardens, S.W.
Feb. 1906	*HENNELL, CHARLES MURRAY ..	The Whiteley Homes, 4, London Wall Buildings, Blomfield Street, E.C.
Apr. 1883	HENRY, EDWARD HUGH	73, High Street, Clapham, S.W.
Oct. 1904	*HENSON, FREDERICK JASPER ..	5, Mount Street, W.
Oct. 1905	*HEPWORTH, ERNEST ALFRED ..	75, Princess Street, Manchester.
Oct. 1905	*HEPWORTH, HERBERT RAIKES ..	County Surveyor's Office, Wakefield.

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5695	Oct. 1909	*HERVEY, THOMAS PERCY ARTHUR	Suva, Fiji.
4188	Oct. 1903	*HESKETT, WILLIAM DONALD ..	"The Hollies," Penrith, Cumberland.
4001	Oct. 1902	*HEWETT, RICHARD	Bridge Street, Guildford.
4965	Oct. 1906	*HEWITT, ARTHUR CECIL	43, All Saints' Road, King's Heath Birmingham.
4440	Oct. 1904	*HEWITT, FRANK	125 Brixton Hill S W
4715	Oct. 1905	*HEWITT, FRANK	Town Hall, Hoyland, Barnsley, Yorkshire.
5959	Oct. 1910	*HEYWOOD, REGINALD	8, Eldon Street, Preston, Lancashire.
3843	Oct. 1901	*HICKMAN, ARTHUR MURHALL ..	Pride Hill Chambers, Shrewsbury.
4716	Oct. 1905	*HICKMAN, FRANK DAVIS	Public Works Department, Pretoria, B.S.A.
4966	Oct. 1906	*HICKMOTT, HENRY CHARLES ..	4, Beaumont Street, Mile End, E.
5182	Oct. 1907	*HICKS, ARTHUR LESLIE	Inland Revenue, Westminster Buildings, Nottingham.
948	May 1883	HICKS, STANLEY (<i>Professional Associate of Council</i>)	29, Lincoln's Inn Fields, W.C.
2963	Oct. 1895	*HICKS, WILLIAM ROOKE, A.M.I.C.E.	Town Hall, Ealing, W.
3693	Oct. 1900	*HIDER, SYDNEY WILLIAM	80, Upper Tollington Park, Stroud Green, N.
5465	Oct. 1903	*HIGGS, KENNETH ALAN	Wickham, Hayward's Heath, Sussex.
4441	Oct. 1904	*HIGHWAY, EVON	Sandpit Lodge Farm, Chobham, Surrey.
3694	Oct. 1900	*HILLIARD, HUGH NEVILLE ..	Chelmsford.
3546	Oct. 1899	*HINDMARSH, MICHAEL ANSELM ..	Glenmore, Glenmore Road, Oxfordshire.
5960	Oct. 1910	*HINE, ERNEST DARYLL	88, Nightingale Lane, Wandsworth, S.W.
4967	Oct. 1906	*HINE, STANLEY GORDON	Newnham, Harpenden, Hertfordshire.
5466	Oct. 1908	*HINGLEY, JOSEPH BLOOMER ..	"Inglebrook," Lutterworth Road, Attleborough, Nuneaton, Warwickshire.
5961	Oct. 1910	*HINGSTON, CECIL VICTOR	28, Friar Gate, Derby.
4189	Oct. 1903	*HINTON, HERBERT ARTHUR ..	5, Crouch Hill, N.
3696	Oct. 1900	*HIPSLEY, FREDERIC WILLIAM ..	156, South Road, Erdington, Birmingham, Warwickshire.
5696	Oct. 1909	*HIRST, WILLIAM FREDERICK ..	Chatham House, Rothwell, near Leeds.
4442	Oct. 1904	*HOBSON, FREDERICK VACHELL ..	Messrs. Hobson, Richards and Co 79, Coleman Street, E.C.
5697	Oct. 1909	*HOBSON, REGINALD BERESFORD	79, Coleman Street, E.C.
4443	Oct. 1904	*HODGES, WILLIAM WESTCOTT ..	3, Bury Street, High Holborn, W.C.
1892	Nov. 1890	*HODGKINSON, JAMES HENRY ..	23, Delamere Street, Ashton-under-Lyme, Lancashire.
3099	Oct. 1896	*HODGSON, ARCHIBALD SANFORD	Westons Place, Warnham, Sussex.
5184	Oct. 1907	*HODSON, ANTHONY GEORGE ..	Kingston, near Lewes, Sussex.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1907	*HODSON, FREDERIC HENRY ..	54, Tooting Bec Road, Upper Tooting, S.W.
Oct. 1907	*HODSON, LAURENCE SCRIVENER	223, Seven Sisters Road, Finsbury Park, N.
Oct. 1904	*HOGGARTH, LAWRENCE STEELE ..	St. Abbs, Kendal, Westmorland.
Oct. 1910	*HOILE, GERALD JOHN HARWOOD	Northbourne, Putney Lower Common, S.W.
Oct. 1903	*HOLBECH, NIGEL LAURENCE ..	21, Bennett's Hill, Birmingham.
Oct. 1902	*HOLBECH, ROBERT CECIL ..	18, Bennett's Hill, Birmingham.
Oct. 1897	*HOLBROW, HERBERT GLIVER ..	44, St. Matthew's Road, Cotham, Bristol.
Oct. 1907	*HOLDFORTH, HAROLD	4, Mosley Street, Newcastle-on-Tyne.
Oct. 1903	*HOLDITCH, CHARLES STANLEY ..	40, Hillside Avenue, Plymouth.
Oct. 1910	*HOLE, WILLIAM GERALD ..	Cranford Mount, Exmouth, Devon.
Oct. 1908	*HOLFORD, SHELLEY	160, Romford Road, Stratford, E.
Oct. 1905	*HOLLINS, SAM	26, Denmark Street, Watford, Hertfordshire.
Nov. 1891	*HOLLIS, HERBERT	Public Works Department, Kingston, Jamaica.
Nov. 1891	*HOLLIS, RALPH	Springfield, Skirlough, Hull.
Oct. 1905	*HOLLIS, RALPH EDMOND ..	District Valuer's Office, Prudential Chambers, Lichfield Street, Wolverhampton, Staffs
Oct. 1906	*HOLMAN, LUTHER MARTIN ..	"Brooklyn," Ditchling Road, Brighton.
Oct. 1894	*HOLMES, JOHN EDWARD ..	309, Oxford Street, W.
Oct. 1910	*HOLROYD, JOHN OTHIC ..	480, Gillott Road, Edgbaston, Birmingham.
Oct. 1908	*HOLT, EDWARD	Engineer's Office, Euston Station, N.W.
Oct. 1910	*HOLZAPFEL, JOHN WILLIAM, N.D.A.	North Elswick Hall, Newcastle-on-Tyne.
Oct. 1902	*HOME, PHILIP WOOLLATT ..	258, Ferme Park Road, Crouch End, N.
Oct. 1896	*HOMFRAY, HERBERT RICHARDS ..	32, Charles Street, Cardiff, Glamorgan-shire.
Oct. 1904	*HONEY, ROBERT LLEWELLYN ..	Assistant Borough Surveyor, Chatham.
Oct. 1906	*HOOKEY, REGINALD EDWARD ..	18, Holwood Road, Bromley, Kent.
Oct. 1907	*HOOPER, HAROLD THOMAS ..	19, Charing Cross Road, W.C.
Oct. 1904	*HOOPER, STANLEY	Bryngwili, Knoll Avenue, Swansea.
Oct. 1905	*HOPKINSON, RICHARD BROWN ..	Broadwood, Storthes Road, Birkby, Huddersfield.
Oct. 1910	*HOPLEY, SYDNEY FRANK ..	Council Offices, Pontyclun, Glam.
Oct. 1903	*HORDER, GERALD MORLEY ..	21, Old Queen Street, Westminster, S.W.
Oct. 1908	*HORNE, EDMUND PEISLEY ..	6, Staines Road, Hounslow, Middlesex.
Oct. 1910	*HORNOR, BASSETT FARDELL ..	Old Bank of England Court, Queen Street, Norwich.
Oct. 1903	*HOSGOOD, RALPH BRIAN ..	84, Osbaldeston Road, N.
Oct. 1908	*HOSKEN, WILFRID	Surveyor's Department, Hendon R.D.C. Great Stanmore, Middlesex.

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4721	Oct. 1905	*HOSKING, HAROLD ARTHUR ..	Hill Crest, Landrake, St. Germans Cornwall.
4449	Oct. 1904	*HOUGHTON, EDMUND GUY.. ..	Pine Lodge, Whitehall Road, Woodford Green, Essex.
3698	Oct. 1900	*HOUGHTON, WILLIAM CHARLES..	The Coburg, Upper Terrace Road Bournemouth, Hampshire.
5968	Oct. 1910	*HOULDSWORTH, AUSTIN FRANK	100, Alliance Avenue, Hull, Yorkshire
5190	Oct. 1907	*HOVENDEN, JACK REGINALD ..	172, Bishopsgate, E.C.
4004	Oct. 1902	*HOW, HERBERT	178, Westcombe Hill, Blackheath, S.E.
4304	Feb. 1904	*HOWARD, EDMUND	41, Bedford Row, W.C.
866	Jan. 1883	HOWELL, ERNEST JOHN	116, Cromwell Road, S.W.
3388	Oct. 1893	*HOWGRAVE-GRAHAM, GEORGE ERNEST	Box 439, Public Works Department Quantity Surveyors' Branch, Pretoria Transvaal.
3550	Oct. 1899	*HOWLAND, GEORGE	15, Heath Street, Hampstead, N.W.
4970	Oct. 1906	*HOWSE, JAMES HAYWARD.. ..	
4723	Oct. 1905	*HUBBARD, WILLIAM HENRY GUEST	51, Guildford Street, Luton, Bedfordshire.
5969	Oct. 1910	*HUCKSTEP, JOHN EDWARD ..	143, Plumstead Common Road, S.E.
5473	Oct. 1908	*HUDSON, HENRY.. .. .	Fern Bank, Stonegravels, Chesterfield Derbyshire.
4724	Oct. 1905	*HUDSON, JOHN CYRIL.. .. .	55, Cross Street, Manchester.
4450	Oct. 1904	*HUGGINS, ERNEST GEORGE.. ..	3, Pancras Lane, Queen Street, E.C.
5474	Oct. 1908	*HUGHES, ALFRED, JUN.	64, Dudley Road, Tipton, Staffs.
5191	Oct. 1907	*HUGHES, JOHN HENRY	Glengowan, Shortlands, Kent.
5475	Oct. 1908	*HUGHES, WILLIAM PARRY.. ..	6, Nott Square, Carmarthen.
6114	Feb. 1911	*HUGHESDON, GERALD EDWARD..	77, Streathbourne Road, Balham, S.W.
5970	Oct. 1910	*HUNT, HERBERT CHARLES ..	12, Lion Gate Gardens, Richmond Surrey.
4451	Oct. 1904	*HUNT, ORLANDO WILLIAM.. ..	Winterfield, Bedale, Yorkshire.
4725	Oct. 1905	*HURCOMB, HAROLD FRANCIS ..	32, Warnborough Road, Oxford.
4971	Oct. 1906	*HUTCHINGS, ALAN	Sutton Estate Office, Seaford, Sussex.
3237	Oct. 1897	*HUTCHINS, RICHARD	Estate Office, Ardnagashel, Bantry, Co. Cork.
5700	Oct. 1909	*HUTCHINSON, THOMAS JAMES ..	Cecily Hill, Cirencester.
5193	Oct. 1907	*HUTLEY, EDWARD	The Chestnuts, Wigborough, Colchester Essex.
4453	Oct. 1904	*HUTTON, FREDERIC NORMAN ..	Architect's Department (Education) L.C.C., 19, Charing Cross Road, W.C.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1910	*¶ IBBETSON, THOMAS HENRY ..	Melbourne, Kendall Avenue, Sanderstead, Surrey.
Oct. 1905	*¶ IBBOTSON, WILLIAM BYROM ..	Sypies, Ember Lane, Esher, Surrey.
Oct. 1906	*¶ INGLEBY, ERNEST JAMES, N.D.A.	Normanton Lodge, Stamford, and Woodville, Roundhay, Leeds.
Oct. 1907	*¶ INGRAM, EDWARD CECIL	The Bungalow, Sturminster Newton, Dorset.
Nov. 1890	* INNES, GILBERT PLANTAGENET MITCHELL	Tredegar Estate Office, Newport, Monmouthshire.
Oct. 1904	* INSKIPP, ARTHUR	5, Bedford Row, W.C.
Oct. 1902	*¶ INSLEY, GEORGE PITRON	Tremont House, Charminster Road, Bournemouth, Hampshire.
Oct. 1894	* IRVINE, ARCHIBALD WYNDHAM ..	Engineer in Chief's Office, C. G. Railway, Cape Town.
Oct. 1905	* ISARD, ERNEST	31, Gayton Road, Hampstead, N.W.
Oct. 1909	*¶ ISITT, FREDERICK HARVEY	45, Holborn Viaduct, E.C.
Oct. 1905	* ISITT, SAMUEL GILBERT, N.D.A. ..	Ashe Green, Campsea Ashe, Wickham Market, Suffolk.
Oct. 1894	* JACKSON, ALFRED ERNEST	City Surveyor's Office, Manchester.
Oct. 1894	* JACKSON, EDWARD HENRY	Windermere Buildings, Windermere, Westmorland.
Oct. 1910	* JACKSON, LAMBERT	35, Woodside Quadrant, Glasgow.
Oct. 1895	* JACKSON, LEONARD LABREY ..	Messrs. Hosking and Booth, Auction and Estate Offices, Twickenham, Middlesex.
Oct. 1902	*¶ JACKSON, RICHARD STEPHENS ..	24, Stone Street, Maidstone.
Oct. 1898	* JACKSON, ROBERT EWAN	Hall Gowan, Carnforth, Lancashire.
Oct. 1905	* JACKSON, STANLEY RICHARDSON	46, St. Kilda's Road, Stoke Newington, N
Oct. 1909	*¶ JAMES, FRANK J.	Rectory Road, West Bridgford, Nottingham.
Oct. 1909	* JAMES, FREDERICK OSCAR	Holcombe, near Bath.
Oct. 1910	* JAMES, HERBERT CECIL	18, East Road, West Ham, E.
Oct. 1902	*¶ JAMES, HERBERT HAROLD	The Moat, Newmarket Road, Cambridge

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5195	Oct. 1907	*JAMES, WILLIAM GEORGE	133, Lavenham Road, Southfields, S.W.
4732	Oct. 1905	*JANES, WALTER JOSEPH	11, Norfolk Mansions, Santos Road East Putney, S.W.
5476	Oct. 1908	*J[JAQUES, THOMAS ARNOLD	12, Bedford Row, W.C.
2630	Feb. 1894	*JARRETT, THOMAS WILLIAM	124, East Street, Sittingbourne, Kent.
4196	Oct. 1903	*JARVIS, ERNEST CORY	The Stone Hut, Purley, Surrey.
6115	Feb. 1911	*JARVIS, ERNEST HENRY	Messrs. Arnott & Son, Woodbridge Suffolk.
5196	Oct. 1907	*JARVIS, LAURENCE ALFRED	General Valuation Office, Dublin.
4733	Oct. 1905	*JECKELLS, WILLIAM AUGUSTUS	Kewhurst, Avenue Road, Wallington Surrey.
4973	Oct. 1906	*JEFFERY, CHARLES JOHN	P.O. Box 203, North Vancouver, British Columbia.
4010	Oct. 1902	*JEFFERY, FRANCIS WILSON	1, Dalgarno Gardens, North Kensington W.
5974	Oct. 1910	*JENKINS, CHARLES HERBERT	District Valuer, Kensington House Haverfordwest, Pembrokeshire.
5975	Oct. 1910	*JENKINS, HAROLD JOHN	4, College Street, Swansea.
4455	Oct. 1904	*JENKINS, WILLIAM LIONEL	County Surveyor's Office, Llandilo, Carmarthen- shire.
4974	Oct. 1906	*JENKINSON, SAMUEL STEWART	G.E.R. Land Agent's Office, Liverpool Street Station, E.C.
5976	Oct. 1910	*JENNINGS, DANIEL STRACHAN	Messrs. Rutter & Co., 30, Abbeygate Street, Bury St. Edmunds, Suffolk.
5977	Oct. 1910	*JENNINGS, FREDERICK GEORGE	Cochfield Hall, Bury St. Edmunds, Suffolk.
5704	Oct. 1909	*JENNINGS, WALTER HENRY	Bemvinda, Queen's Road, Kingston Hill Surrey.
4734	Oct. 1905	*JENNINGS, WILLIAM ALFRED	7, Romford Road, Stratford, E.
2460	Nov. 1891	*JESSETT, CHAS. EDWARD VERNON	100, South End, Croydon.
4735	Oct. 1905	*J[§JESSUP, DAVID POOLEY	Inland Revenue, County Chambers Northampton
5978	Oct. 1910	*JOHN, DAVID HOPKIN	Plough Inn, Cefn Cribbwr, nr. Bridgend Glam.
4975	Oct. 1906	*J[JOHNSON, ARTHUR WILLIAM	18, Queen's Road, Harrogate
5197	Oct. 1907	*JOHNSON, CLIFFORD NOEL	19, Priory Street, Dudley, Worcestershire
3700	Oct. 1900	*JOHNSON, FREDERICK JOHN	70, Tamworth Road, Hertford.
5198	Oct. 1907	*J[JOHNSON, HERBERT DAVIES	54, St Peter's Gate, Stockport, Cheshire
5979	Oct. 1910	*JOHNSON, HERBERT THOMAS	"Meersbrook," Elsee Road, Rugby, Warwickshire.
4197	Oct. 1903	*JOHNSON, WILLIAM INGLIS	Estate Office, 18, St. Mary Street Stamford, Lincolnshire.
1375	Feb. 1887	*JONAS, SAMUEL MARSHALL	27, Market Hill, Cambridge, and 8A Whitehall Place, S.W.
3703	Oct. 1900	*J[JOHNSON, ARTHUR BAYLY	50, Threadneedle Street, E.C.
5705	Oct. 1909	*JONES, ARTHUR DEW	City Surveyor's Office, Town Hall Manchester.

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Oct. 1908	*JONES, CHARLES THOMAS	124, St. Albans Avenue, Bedford Park, Chiswick, W.
Oct. 1908	*JONES, DAN IVOR	32, Full Street, Derby.
Oct. 1907	*JONES, EDWARD HEMMING	
Oct. 1907	*JONES, FRANK CECIL	Frewin Court, Cornmarket Street, Oxford.
Oct. 1909	*JONES, LEWIS FAREWELL	Brenley, Mitcham, Surrey.
Oct. 1908	*JONES, MONTAGUE WILLIAM	Frewin Court, Cornmarket Street, Oxford.
Oct. 1898	*JONES, PERCY EVERLEY	5, Little George Street, Westminster, S.W.
Oct. 1899	*JONES, PHILIP VIVIAN	"Hazeldene," Hengoed, via Cardiff.
Oct. 1907	*JONES, WALTER GEORGE	46, Elliott Road, North Brixton, S.W.
Dec. 1883	JORDAN, GEORGE HENRY	7, Little College Street, Westminster, S.W.
Nov. 1891	*JOYCE, HARRY WARD, B.SC.	Alton Grange, Ashby-de-la-Zouch, Leicestershire.
Oct. 1906	*JULIAN, WILLIAM FRANCIS	4, Victoria Parade, Newquay, Cornwall.
Oct. 1902	*JULL, ROBERT CHARLES	1, Cumberland Gardens, Tunbridge Wells, Kent.
May 1886	*JULL, WILLIAM VINCENT	35, Old Queen Street, Westminster, S.W.
Nov. 1890	*KAY, WALTER ROBERT	Highway Board, Douglas, Isle of Man.
Oct. 1900	*KAYE, HERBERT	8, St. John's North, Wakefield, Yorkshire.
Oct. 1904	*KEAY, RALEIGH WILLIAM McLAREN	3, Bloomsbury Street, W.C.
Oct. 1895	*KEAY, WILLIAM	21, Danes Hill Road, The Fosse, Leicester.
Oct. 1902	*KEELE, JOHN DANIEL	26, St. Mary's Road, Highbury, N.
Oct. 1907	*KEELEY, CECIL JOHN HARVEY	The Osprey, Bowood, Calne, Wilts.
Oct. 1894	*KEEP, WILLIAM HENRY	Valuation Department, Inland Revenue, 57, Albion Place, London Rd., Reading.
Oct. 1901	*KEIGHLEY, SAMUEL	27, Nicholas Street, Burnley, Lancashire.
Oct. 1901	*KELLEWAY, HERBERT DAVIES	61, Tweedy Road, Bromley, Kent.
Oct. 1900	*KELLY, ARTHUR RALPH	233, Camden Road, N.
Oct. 1899	*KELLY, GEORGE WILLIAM CALVER	St. James Street, Wetherby, Yorkshire.
Oct. 1907	*KEMP, HARRY GRAEME	"The Elms," Aldringham, Saxmundham, Suffolk.

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3706	Oct. 1900	*KEMSLEY, NORMAN BOLTON ..	17, Finsbury Circus, E.C.
2970	Oct. 1895	*KEMSLEY, WILLIAM HUGH ..	17, Finsbury Circus, E.C., and Woodford Green, Essex.
4978	Oct. 1906	*KENDZIOR, FRANK FELIX ..	Burton, Lincoln.
5707	Oct. 1909	*KENNARD, ALFRED JAMES ..	57, The Crescent, Croydon.
5708	Oct. 1909	*KENNARD, FREDERICK HARRISON ..	40, Heathfield Road, South Croydon.
5204	Oct. 1907	*KENNARD, HORACE BURDOCK ..	"St. Margaret's," New Eltham, Kent.
5483	Oct. 1908	*KENNAWAY, ARTHUR LEWIS ..	Heytesbury, Wiltshire.
5484	Oct. 1908	*KENNEDY, PERCY EDWARD ..	Valuer's Department, Inland Revenue, South Parade, Northallerton, York.
2590	Oct. 1893	*KENNETT, CHARLES ARTHUR ..	8, Duke Street, Adelphi, W.C.
4198	Oct. 1903	*KENT, PHILIP, JUN. ..	19, Leys Avenue, Letchworth, Hertfordshire.
4199	Oct. 1903	*KERR, ARTHUR PRESTON ..	Moothall, Newcastle-upon-Tyne.
1077	Jan. 1884	*KERR, ARTHUR HERBERT ..	Blake Street, York.
4200	Oct. 1903	*KERR, NORMAN MUNRO ..	The Aboukir Company, Ltd., Khartoum Station, Egypt.
5205	Oct. 1907	*KERSHAW, SAMUEL RYDER ..	Holly House, Bury Old Road, Manchester.
5485	Oct. 1908	*KETTERINGHAM, SYDNEY ..	25, Cheriton Square, Balham, S.W.
3241	Oct. 1897	*KIBBLEWHITE, HENRY JAMES TRELEAVEN	3, Warwick House Street, Cockspur Street, S.W.
2688	Oct. 1894	*KIESER, WILLIAM HENRY GUSTAV ..	City Engineer's Office, Bristol.
5206	Oct. 1907	*KIFT, GEORGE ANSLEY ..	38, Lansdowne Road, Tottenham, N.
5709	Oct. 1909	*KILFORD, WILLIAM GEORGE ..	Messrs. David and David, 27, High Street, Cardiff.
4979	Oct. 1906	*KINDELL, FRANCIS PERCY ..	Surveyor's Department, Urban District Council, Beckenham, Kent.
3856	Oct. 1901	*KING, FREDERICK AUGUSTUS ..	32, Isledon Road, Finsbury Park, N.
5980	Oct. 1910	*KING, GILBERT RIGLEY ..	Town Hall, Twickenham, Middlesex.
5982	Oct. 1910	*KING, HERBERT JAMES ..	1, Woodland Road, New Southgate, London.
4930	Oct. 1906	*KING, JOHN LEONARD ..	53, Friars Street, Sudbury, Suffolk.
4737	Oct. 1905	*KING, PERCY JAMES CHURCH ..	Wynyard, West Park, Far Headingley, Leeds.
1387	Mar. 1887	*KING, WILLIAM ISAAC ..	The Elms, Rickmansworth, Herts.
4457	Oct. 1904	*KINGSFORD, GEOFFREY NEVILLE ..	Seoni, Bengal, India.
5983	Oct. 1910	*KINGSTON, ARCHIBALD LAWRENCE ..	59, Castelnau, Barnes, S.W.
4981	Oct. 1906	*KINTON, HAROLD ERNEST ..	1, Radipole Road, Fulham, S.W.
5207	Oct. 1907	*KIRK, ALLAN ..	12, Paton Street, Piccadilly, Manchester.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1909	*KIRKWOOD, NORMAN FRASER ..	68, Brook Road, Blundellsands, near Liverpool.
Oct. 1909	*KISCH, AUGUSTUS MATTLAND ..	41, Bedford Row, W.C.
Oct. 1906	*KISLINGBURY, ARTHUR VERNON	16, Clifford's Inn, Fleet Street, E.C.
Oct. 1905	*KLOSZ, HUBERT JOHN.. ..	37, Platt's Lane, Hampstead, N.W.
Oct. 1909	*KNAPMAN, HARRY LETHBRIDGE	50, Newcombe Road, Polygon, Southampton.
Oct. 1900	*KNIBB, FREDERICK CHARLES ..	112, West Side, Clapham Common, S.W.
Oct. 1910	*KNIGHT, CHARLES WILLIAM ..	32, Cardiff Road, Norwich.
Oct. 1908	*KNIGHT, ROBERT MALTMAN	66, Wickham Road, Brockley, S.E.
Oct. 1910	*KNIGHTON, THOMAS SPENCER ..	Nevill Lodge, Tunbridge Wells.
Oct. 1906	*KNOWLES, JOSEPH BERTRAM ..	39, Victoria Street, Westminster, S.W.
Oct. 1907	*KNUBLEY, MILES PONSONBY ..	Steeple Ashton Vicarage, Trowbridge, Wiltshire.
Oct. 1909	*KOHLEH, HANS	8, Ingham Road, West Hampstead, N.W.
Oct. 1903	*LABDON, HERBERT GEORGE ..	c/o C. H. Smith, Esq., 68, Fletcher's Chambers, Cape Town.
Oct. 1906	*LADD, WALTER WILLOUGHBY ..	9, Spring Gardens, S.W.
Oct. 1906	*LAIRD, JOHN.. .. .	High Street, Marlow, Bucks.
Oct. 1899	*LAIRD, NINIAN PARKER ..	Thurnby, near Leicester.
Oct. 1908	*LAKE, WALLACE STICKLAND, A.M.I.C.E.	c/o J. R. Lake, 2, Marlborough Road, Plymouth.
Oct. 1907	*LAMBERT, ARTHUR PEPLOE ..	Trenton, Benhill Road, Sutton, Surrey.
Oct. 1907	*LAMBERT, EDWIN HANS ..	Sunbury, Matfield, Kent.
Oct. 1903	*LAMBERT, GEORGE ARROW..	The Castle, Winchester.
Oct. 1904	*LAMBLE, WILLIAM HERBERT ..	247, Littleton Road, Lower Kersal, Manchester.
Oct. 1895	*LAMPRILL, WILLIAM THOMAS ..	29, Leathwaite Road, Clapham Common, S.W.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4739	Oct. 1905	* LANCASTER, SIDNEY JAMES ..	Union Valuer's Office, 4, King Street Blackburn, Lancs.
5498	Oct. 1905	* LANDER, SIDNEY MONTEM ..	1, Waresley Villas, Old Bath Road, Cheltenham, Gloucestershire.
5936	Oct. 1910	* LANE, FREDERICK CHARLES ..	5, Market Place, Morpeth, Northumbria.
4205	Oct. 1903	* LANG, AUGUSTUS BERNARD DASH- WOOD	3, King Street, Cheapside, E.C.
5715	Oct. 1909	* LANGFORD, DOUGLAS CHARLES ..	Brooklyn, Dollis Road, Church End, Finchley, N.
3708	Oct. 1900	* LANHAM, LAURENCE	36, Beaumont Street, Oxford.
1969	Jan. 1891	* LANSDOWN, GEORGE ARTHUR ..	9, Regent Street, Waterloo Place, S.W.
4986	Oct. 1906	* LARGE, JOHN GERALD	Messrs. Ogden, Sons, and Olley, Hill Road, Wimbledon, S.W.
2051	Mar. 1891	* LARKIN, RICHARD WEBSTER ..	8 and 9, Great Newport Street, & Martin's Lane, W.C.
5987	Oct. 1910	* LATHAM, THOMAS SELBY	Altamira, Stonebridge Park, N.W.
3560	Oct. 1899	* LAURENCE, WALTER BERNARD ..	4, Auriol Road, West Kensington, W.
4740	Oct. 1905	* LAVARACK, HAMLETT UNITT ..	Chestnut Corner, Finchley Road, Golden Green, N.W.
4987	Oct. 1906	* LAVINGTON, THOMAS HENRY RUSS	Poulton House, Marlborough, Wilts.
3709	Oct. 1900	* LAWLEY, GEORGE FRANK	38, Willoughby Lane, Tottenham, N.
4741	Oct. 1905	* LAWRANCE, JOHN, JUN.	30, Lushington Road, Harlesden, N.
5988	Oct. 1910	* LAWRY, WILLIAM ARTHUR	Tharsis Villa, Calstock, Cornwall.
4742	Oct. 1905	* LAWS, SIDNEY BUSH	Brincliffe, Holland Road, Sutton, Surrey.
4988	Oct. 1906	* LEAH, WILLIAM	3, Moseley Villas, Barnwood, Gloucestershire.
5989	Oct. 1910	* LEE, ALEXANDER VICTOR	143, High Street, Guildford.
5574	Feb. 1909	* LEE, ALFRED FREDERICK	Conegra, London Road, High Wycombe, Bucks.
441	Apr. 1876	LEE, GEORGE CANSFIELD	144, The Mount, York.
4990	Oct. 1906	* LEE, JOHN PINCKE	Plas Tirion, Cowbridge Road, Bridgend, Glamorganshire.
5489	Oct. 1908	* LEE, LESLIE HERBERT	22, High Street, Ashford, Kent.
5990	Oct. 1910	* LEE, NORMAN ALFRED	Coombe Hurst, Wallington, Surrey.
5829	Feb. 1910	* LEE, WILLIAM RICHARD	Southcote, Elm Grove Road, Ealing, W.
5490	Oct. 1908	* LEECH, ARTHUR CLIVE	Worthington Lodge, Worthington, near Wigan, Lancashire.
5085	Feb. 1907	* LEES, HENRY BERRY	Public Works Office, Colombo, Ceylon.
4022	Oct. 1902	* LEES, RANDLE BURLSLAM	Woodside, Bradford-on-Avon, Wilts.
3161	Feb. 1897	* LEESE, VERNON FRANCIS	Crown Offices, Whitmead Park, Pateley end, near Lydney, Gloucestershire.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Feb. 1901	*LEIGH, VINCENT STANLEY	316A, Mare Street, Hackney, N.E.
Oct. 1905	*¶LE MAY, TRACEY DEAVIN	209, Carlton Road, Toronto, Canada.
Oct. 1899	*LEMMOIN-CANNON, HENRY	17, St. Michael's Road, S.W.
Oct. 1909	*LEONARD, EDWARD	The Nook, Mortimer Road, Ealing, W.
Jan. 1891	*LEWIS, ARTHUR LLEWELYN	45, St. John's Park, Blackheath, S.E.
Oct. 1898	*¶LEWIS, JOHN	Valuer's Office, Westgate, Chichester.
Oct. 1899	*¶LICKIS, LEONARD	10, Fawnbrake Avenue, Herne Hill, S.E.
Oct. 1910	*LIDDELL, JOHN GEORGE WALTON ..	Chesters Estate Office, Humshaugh, Northumberland.
Oct. 1908	*¶LIGHTBOWN, ALFRED STUART ..	General Valuation Office, 6, Ely Place, Dublin.
Apr. 1884	LIGHTFOOT, JOHN GEORGE	5, Great College Street, Westminster Abbey, S.W.
Oct. 1910	*LINDSAY, CHARLES ALLEN	Dunchurch, Rugby, Warwickshire.
Oct. 1903	*¶LINDSELL, PHILIP JANSON	Bearton, Hitchin, Hertfordshire.
Oct. 1904	*¶LINE, HENRY WILLIAM	London County Council, 19, Charing Cross Road, W.C.
Oct. 1908	*¶§LINNEY, JOSEPH FREDERIC .. c	o W. H. Robinson, Cromwell Buildings, Blackfriars Street, Manchester.
Oct. 1908	*LISTER, ERNEST EDWARD c	o T. B. Scott, Caucasus Copper Co., Ltd., Batoum, South Russia.
Nov. 1892	*LITTLE, HENRY	82, Queen Street, Cheapside, E.C.
Oct. 1900	*LIVING, CHARLES, JUN.	75, The Grove, Stratford, E.
Oct. 1907	*¶LLOYD, SYDNEY HAMILTON	Holcote, Parkstone Road, Poole, Dorset.
Oct. 1906	*LOADES, FRANK CHARLES	Messrs. Pepler and Allan, 3, Pall Mall East, S.W.
Oct. 1908	*LOCK, CECIL WILLIAM BEST	9, Station Road, Watford, Herts.
Oct. 1909	*¶LOCK, CHARLES	District Valuer's Office, High Wycombe, Bucks.
Oct. 1907	*¶LOCKYER, EDWARD HERBERT ..	5, Great College Street, Westminster Abbey, S.W.
Oct. 1908	*¶LOE, SYDNEY JOHN	10, Cliff Terrace, St. John's, S.E.
Oct. 1897	*LOMAX, ERNEST GEORGE	Parks Department, London County Council, 11, Regent Street, S.W.
Oct. 1908	*LONGBOTTOM, JOHN LEONARD ..	Dingleside, Gledholt, Huddersfield, Yorkshire.
Oct. 1905	*LORAM, JOHN ANNING	Government Ordnance Survey Office, Colombo, Ceylon.
Oct. 1906	*¶§LORD, FREDERICK WILLIAM ..	Valuer's Department, Inland Revenue, Bank Chambers, Doncaster, Yorkshire.
Oct. 1908	*LORIMER, GORDON	Departamento de Via y Abras, Ferro Carril del Sud, Buenos Aires.
Oct. 1901	*LOVE, JAMES BARR	The College, Holmes Chapel, Cheshire.
Oct. 1895	*LOVEGROVE, CHARLES GRESHAM ..	3B, Grove End Road, St. John's Wood, N.W.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
3862	Oct. 1907	*¶LOVELUCK, EDWARD	23, Park Street, Bridgend, Glamorganshire.
5719	Oct. 1909	*LOWDEN, ANDREW	Estate Office, Roffey Park, Horsham, Sussex.
1355	Jan. 1887	*LOWE, CHARLES ROBERT	30, Somerset Street, Portman Square, W.
5993	Oct. 1910	*LOWICK, HENRY CAPELL	Public Works Department, Hong Kong.
5214	Oct. 1907	*¶LOXTON, FRANCIS WILLOUGHBY	20, Princes Street, Yeovil, Somerset.
4209	Oct. 1903	*¶LUCAS, JOHN CLAY	Castle Precincts, Lewes, Sussex.
489	May 1877	LUCAS, JOSEPH	11, Defoe Road, Tooting Graveney, S.W.
3022	Jan. 1896	*LUCK, GEORGE EDWARD	Estate Office, Crouch End Station, London.
3934	Feb. 1902	*¶LUFFINGHAM, WILLIAM JOHN ..	Estates and Valuation Department, London County Council, 9, Spring Gardens, S.W.
3566	Oct. 1899	*¶LUKE, JOHN	3 Dartmouth Road, Chorlton-cum-Medley, Hardy Manchester.
3563	Oct. 1899	*LUMLEY, EDWARD ADRIAN ..	22, St. James's Street, S.W.
3400	Oct. 1898	*LUMLEY, FREDERICK ROBERT ..	Mamhead Park, Exeter.
4023	Oct. 1902	*LUNN, ALGERNON PERCY	Wentbridge, Pontefract, Yorkshire.
5086	Feb. 1907	*LUNNISS, SYDNEY FREDERICK ..	Liphook, Hampshire.
4993	Oct. 1906	*LYDDON, ALFRED JONATHAN, A.M.I.C.E.	King's Norton and Northfield U.I.E. Engineer's and Surveyor's Office, Valentine Road, King's Heath, Worcester.
4465	Oct. 1904	*¶LYNDE, WALTER MIGHELLS ..	Public Works Department, Nairobi, British East Africa.
4748	Oct. 1905	*LYNE, HARRY	The Crescent, Truro, Cornwall.
2692	Oct. 1894	*LYONS, EDWARD COLVILL ..	Estate Office, Rugeley, Staffordshire.
4466	Oct. 1904	*MCALL, JACOBUS STEWART JOHNSON	Director of Agriculture, Zomba, Nyasaland, Africa.
5720	Oct. 1909	*¶MCALLUM, DANIEL	325, Byres Road, Glasgow.
1144	Apr. 1884	MCALLUM, PETER SERVICE ..	Midland Railway, Derby.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1904	*¶ McDONALD, JAMES RATCLIFF ..	Charlton House, Charlton, near Sheperton, Middlesex.
Oct. 1905	*McDOUGALL, DOUGLAS ROBERT	138, High Street, Bromley, Kent.
Oct. 1908	*MACE, CHARLES MARRINER ..	"Umberleigh," Willoughby Road, Kingston-on-Thames, Surrey.
Oct. 1893	*MACER, ALFRED THOMAS	10, Old Jewry Chambers, E.C.
Oct. 1901	*McGAW, ANDREW KIDD	Van Diemen's Land Company, Burnie, Tasmania.
Oct. 1908	*¶ McGHIE, CHARLES	38, Collingwood Buildings, Collingwood Street, Newcastle-on-Tyne.
Oct. 1909	*MACHATTIE, JOHN MACINTOSH ..	13, Charing Cross, S.W.
Feb. 1898	*MACKENZIE, HECTOR JOHN MAXWELL	Granville Estate Office, Bude, North Cornwall
Oct. 1905	*¶ MACKENZIE, HENRY BLINMAN ..	3, Warwick House Street, Charing Cross, S.W.
Oct. 1904	*¶ McKERROW, JAMES WEIR, A.M.I.C.E.	Corporation Waterworks, Town Hall, North Shields, Northumberland.
Oct. 1908	*MACKINNON, ALEXANDER DENT OSWALD	Messrs. Burd and Evans, School Gardens, Shrewsbury.
Oct. 1907	*McKINSTRY, ARTHUR DOUGLAS	Esbet Khorshed, Alexandria, Egypt.
Oct. 1900	*MACKINTOSH, WILLIAM SMITH ..	Baileymawr, Penybont, Radnorshire.
Oct. 1906	*¶ MCSHEEHY, JOHN EDWARD GERALD	"Donoman," The Drive, Wimbledon, S.W.
Oct. 1910	*§ McTAGGART, HUGH HARVEY ..	2, Norham Street, Crossmyloof, Glasgow.
Oct. 1907	*McWILLIAM, JOHN ALEXANDER	29, Eyre Crescent, Edinburgh.
Oct. 1907	*MADDOCK, GEORGE	Messrs. Walsh and Nicholas, Museum Chambers, Halifax, Yorkshire.
Feb. 1900	*¶ MAGER, SYDNEY	34, Campden Hill Court, Kensington, W.
Oct. 1900	*¶ MAIDES, PERCY THOMAS	"Homestead," Morland Road, Croydon.
Oct. 1904	*MAIN, THOMAS FORSTER	Nagpur, Central Provinces, India.
Oct. 1909	*¶ MAIR, WILLIAM FRASER	The Elms, Stretford, Manchester.
Oct. 1910	*MALCOM, JAMES ARCHIE	Old Bank House, Largs, Ayrshire.
Oct. 1910	*MALLETT, JOHN GRAHAM	"Glenshee," Hollingbourne Road, Herne Hill, S.E.
Oct. 1896	*MALLINSON, CHARLES HERBERT	Market Place, Huddersfield, Yorkshire.
Oct. 1905	*MANN, ALFRED HENRY	381, Lordship Lane, East Dulwich, S.E.
Oct. 1894	*MANN, FREDERICK CHARLES THOMAS	Woking, Surrey.
Oct. 1908	*MANSON, EDWARD BERESFORD ..	Survey Office, Badulla, Ceylon.
Oct. 1898	*MARCUS, WILLIAM MORTIMER ..	31, St. John's Hill, Clapham Junction, S.W.
Oct. 1906	*¶ MARKHAM, CHRISTOPHER WILLIAM O'LEARY	Narborough, Albert Road, Watford, Herts.
Oct. 1902	*¶ MARKS, THOMAS EDWARD	30, Wimborne Gardens, Ealing, W.
Oct. 1901	*MARRIAN, HAROLD GREENWOOD, A.M.I.C.E.	Bank Chambers, Twickenham, Middlesex.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4028	Oct. 1902	*MARSHALL, GEORGE ERNEST ..	The Hollies, Handsworth, Sheffield.
5993	Oct. 1910	*MARSHALL, TOM OWEN ..	Estate Office, Midland Railway, Derby.
5724	Oct. 1909	*MARSHALL, WILLIAM THOMAS, M.A. (Oxon.) ..	Lindenhurst, Chesterfield, Derbyshire.
3110	Oct. 1896	*MARTIN, ALEXANDER WILLIAM	The Laurels, Marden Road, South Tottenham, N.
5999	Oct. 1910	*MARTIN, ARTHUR ..	Glencoe, Clareville Rd., Rathgar, Dublin.
6000	Oct. 1910	*MARTIN, FRED SCOTT ..	79, Main Street, Keswick, Cumberland.
5219	Oct. 1907	*MARTIN, FREDERICK MARK ..	Edenhurst, Tower Street, Winchester.
4996	Oct. 1906	*MARTIN, HARRISON ..	27, Chancery Lane, W.C.
4997	Oct. 1906	*MARTIN, MORITZ RICHARD ..	14, Woodfield Road, Ealing, W.
5504	Oct. 1908	*MARTIN, VICTOR CALLINGHAM ..	The Nook, Shiplake-on-Thames, Oxford.
5505	Oct. 1908	*MASKELL, REGINALD ..	15, Carleton Road, Tufnell Park, N.W.
4998	Oct. 1906	*MASLEN, THOMAS PATRICK VINCENT ..	56, Cavendish Road, Brondesbury, N.W.
4755	Oct. 1905	*MASON, ARNOLD STEWART ..	Engineer's Department, Corporation of Waterworks, Liverpool.
4471	Oct. 1904	*MASON, FRANCIS SCOTT ..	Clarendon House, Clarendon Road, Putney, S.W.
3865	Oct. 1901	*MASTERS, WILLIAM HENRY ..	Glencairn, Arthur Road, Southampton, Hampshire.
4756	Oct. 1905	*MATHEWS, HUGH SPENCER ..	12, Waterloo Street, Birmingham.
5220	Oct. 1907	*MATTHEWS, DOUGLAS PERCIVAL	15, Grimstone Terrace, Plymouth.
5725	Oct. 1909	*MATTHIAS, ALFRED ALEXANDER	118, Stanhope Street, Regent's Park, N.W.
5726	Oct. 1909	*MATTICK, ALLAN WALTER GEORGE ..	Market Place, Radstock, Somerset.
2533	Nov. 1892	*MAUGHAN, JOHN ..	Estate Office, Jervaulx Abbey, Midland, S.O., Yorks.
4030	Oct. 1902	*MAY, PERCIVAL TRENTAM ..	Holmesdale, Nutfield, Surrey.
5727	Oct. 1909	*MAY, CYRIL ERNEST ..	Messrs. Simmons and Sons, Henley-on-Thames, Oxfordshire.
6001	Oct. 1910	*MAY, WILLIAM STOKES ..	14, John Street, Bedford Row, W.C.
4472	Oct. 1904	*MAYHEAD, BASIL STUART ..	14, Strathyre Avenue, Norbury, S.W.
6002	Oct. 1910	*MAYNE, ARTHUR JOHN ..	Holme Park Estate Office, Sonning, Reading.
4032	Oct. 1902	*MEACHER, EDMOND ..	Worcester Chambers, Pierpoint Street, Worcester.
3403	Oct. 1895	*MEACHER, SYDNEY GEORGE ..	Marlee, near Blairgowrie, Perthshire.
6003	Oct. 1910	*MEARS, JOHN ARTHUR ..	49, Eden Street, Kingston-on-Thames, Surrey.
2597	Oct. 1893	*MELLOR, JAMES FREDERICK ..	110, St. James's Street, Brighton.
4473	Oct. 1904	*MELLOR, JOHN FRANCIS SHAW ..	The Cottage, Brodsworth, Doncaster, Yorks.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1908	*¶ MELLOWS, FREDERICK WILLIAM	Northbrook Lodge, Lansdowne Road, Woodford, Essex.
Oct. 1895	* MENMUIR, ROBERT WILLIAM ..	Town Hall, Woodstock, Cape Colony, South Africa.
Nov. 1892	* MENZIES, ROBERT	Merton Estate Office, Thetford, Norfolk.
Oct. 1910	* MENZIES, WILLIAM KENNETH ..	Golspie, Englefield Green, Surrey.
Oct. 1899	* MEREDITH, PERCY WILLIAM ..	50, Cannon Street, E.C.
Oct. 1906	*¶ MERRETT, HAROLD THRIFT ..	5, Great College Street, Westminster Abbey, S.W.
Apr. 1884	MERRETT, JAMES.. ..	5, Great College Street, Westminster Abbey, S.W.
Oct. 1909	* METCALFE, WILLIAM	Kellingley, Knottingley, Yorkshire.
Nov. 1892	* MEW, ROBERT HEATH.. ..	Dudley House, Ladbroke Road, Redhill, Surrey.
Oct. 1909	*¶ MILES, JOHN GUILFORD	The Denes, Great Yarmouth, Norfolk.
Oct. 1907	*¶ MILES, LEONARD PERCY	Netherfield, Scott's Lane, Shortlands, Kent.
Oct. 1910	* MILLAR, ALEXANDER WALKER ..	200, High Street, Kirkcaldy, Fifeshire.
Oct. 1906	*¶ MILLAR, PETER	Borough Engineer's Office, Southamp- ton.
Oct. 1904	* MILLER, FRED	40, Glisson Road, Cambridge.
Oct. 1894	* MILLER, FREDERICK WILLIAM ..	"Newholme," Thornlaw Road, West Norwood, S.E.
Nov. 1892	*¶ MILLER, GEORGE FREDERICK ..	Town Hall, Hastings, Sussex.
Oct. 1906	*¶ MILLER-CROOK, HERBERT.. ..	106, Warwick Road, Carlisle.
Oct. 1909	*¶ MILLS, BASIL RUPERT	10, Wigmore Street, W.
Oct. 1901	*¶ MILLS, DANIEL	Valuer's Department, Windsor House, Shrewsbury.
Oct. 1908	*¶ MILLS, ROBERT HENRY	The Bungalow, Combe Down, Bath.
Oct. 1907	*¶ MILNE, JAMES LOGIE.. ..	The Windmill, Wimbledon Common, S.W., and c/o E. H. Collins, 45, Parliament Street, S.W.
Oct. 1903	* MILNE, WILLIAM EDWARD STREATFEILD	15, Great James Street, Bedford Row, W.C.
Oct. 1906	* MILNES, CHARLTON	57, Hamilton Square, Birkenhead.
Feb. 1882	MILNES, ROBERT.. ..	City Surveyor's Office, Guildhall, E.C.
Oct. 1903	*¶ MILNOR, ERNEST, B Sc. (Lond.), A M.I.C.E.	City Engineer's Office, Guildhall, Worcester.
Feb. 1906	*¶ MIRAMS, ARTHUR EDWARD ..	45, Elmdale Road, Palmer's Green, N.
Feb. 1908	* MITCHELL, ARCHIBALD FRANCIS	c.o. Esquimalt and Nanaimo Railway, Engineering Department, Victoria, British Columbia.
Oct. 1901	* MITCHELL, HERBERT ARTHUR ..	40, Ship Street, Brighton.
Feb. 1906	*¶ MITCHELL, SIDNEY	c o Charles Osenton, Station Road, Ashted, Surrey.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
5731	Oct. 1909	*MITCHELL, WILLIAM CHALMERS	Gresford, Dorchester.
3574	Oct. 1899	*MOAT, ERNEST WILLIAM	77, Byne Road, Sydenham, S.E.
3049	June 1896	*MOERAN, ARCHIBALD EDWARD . .	Lissadell, Stillorgan Park, Co. Dubl.
4477	Oct. 1904	*† MOISER, CYRIL	Heworth Grange, York.
3494	Feb. 1899	*† MOLYNEUX, FRANK EUSTACE . .	16, Walpole Road, Strawberry Hill, S.W.
1973	Jan. 1891	*MOLYNEUX, HERBERT ERNEST . .	Brantwood, Riddlesdown Road, Purley, Surrey.
5003	Oct. 1906	*MONTGOMERY, GEORGE	4, South View Villas, Rivington Road, Wealdstone, Middlesex.
5508	Oct. 1908	*MOODY, HERBERT LINE	8, Harcourt Terrace, Salisbury.
3871	Oct. 1901	*† MOORE, ARTHUR WILLIAM	Croydon Road, Caterham Valley, Surrey.
4217	Oct. 1903	*† MOORE, ERNEST LLEWELLYN . .	Wellesley House, 7, Mill Lane, Wellesley, N.W.
3050	June 1896	*MOORE, HUGH ARMYTAGE	Corrie Wood, Castlewellan, Co. Down.
4218	Oct. 1903	*MOORE, RICHARD CHARLES	Blomfield House, London Wall, E.C.4.
4478	Oct. 1904	*MOORE, THOMAS HAROLD	Southend House, Tewkesbury, Gloucestershire.
5732	Oct. 1909	*MORE, JOHN NOVIS	Crown Lodge, Harlech, North Wales.
5223	Oct. 1907	*MORGAN, ERNEST WILLIAM	29, Fleet Street, E.C.4.
4759	Oct. 1905	*MORGAN, HAROLD WOOSNAM	66, Grafton Road, Acton, W.
5733	Oct. 1909	*† MORGAN, IFOR JOHN	Butts, Ilminster, Somerset.
5224	Oct. 1907	*† MORGAN, RICHARD CROKE, B.A. . .	Buckland, Waterden Road, Guildford.
5225	Oct. 1907	*† MORGAN, THOMAS EDWIN	41, Bedford Row, W.C.
5734	Oct. 1909	*† MORRIS, ALEXANDER GEORGE	90, Hermon Hill, South Woodford, N.E.
3405	Oct. 1898	*† MORRIS, ARTHUR	3, Derby Terrace, Nottingham.
6006	Oct. 1910	*§ MORRIS, CLIFFORD	
2632	Feb. 1894	*MORRISON, DANIEL	41, John Dalton Street, Manchester.
6007	Oct. 1910	*MORRISON, JOHN BAXTER	Elderslie Estates Office, Deanside, Renfrew.
4114	Feb. 1903	*MORSE, DUDLEY WALTER	Kirtlington, Oxford.
6008	Oct. 1910	*† MORTON, HUGH	"Bransfield," Eagle Lane, Snaresbrook, Essex.
6009	Oct. 1910	*MORTON, THOMAS CHALMERS	5, Cross Street, Manchester.
6010	Oct. 1910	*† MUIRHEAD, THOMAS	220, St. Vincent Street, Glasgow.
3406	Oct. 1898	*MULLETT, HENRY THOMAS	103, Melody Road, Wandsworth Common, S.W.
3575	Oct. 1899	*† MUMBY, ELVIN FOWLER	War Office, 80, Pall Mall, S.W.
5735	Oct. 1909	*MUMFORD, FRANK SEPTIMUS	289 and 289A, Regent Street, W.
6011	Oct. 1910	*MUNDLE, ERNEST RANSON	42, St. George's Terrace, Jesmond, Newcastle-upon-Tyne.
5087	Feb. 1907	*MUNDY, HUGH ALGERNON GODFREY	Department of Agriculture, Salisbury, Rhodesia, South Africa.
5226	Oct. 1907	*MURRAY, ARTHUR MALCOLM	67, Irving Road, Bournemouth, H.M. Office of Works, Storey's Gate, S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1908	*MURRAY, PENRY JOHN	Estate Office, Condover, Shrewsbury.
Oct. 1905	*§MURRELL, SIDNEY JAMES	86, Beaumont Street, Oxford.
Oct. 1902	*MURTOUGH, JOSEPH	56, Stubbington Avenue, North End Portsmouth.
Oct. 1910	*NASH, EUGENE FLEETWOOD	"Heathfield," Gerrard's Cross, Bucks.
Oct. 1910	*NASH, HARRY NORTON	District Valuer's Office, 24, Bridge Street, Newport, Mon.
Oct. 1904	*¶NAYLOR, JOHN STUART	Edenthorpe, Beckenham, Kent.
Oct. 1902	*¶NEAME, FREDERICK IVO	The Offices, Macknade, Faversham, Kent.
Oct. 1909	*¶NEIL, DAVID MAXWELL	Park Estate Office, Leigh Road East, Westcliffe, Essex.
Oct. 1910	*NELSON, EDWARD RUSSELL	Valuer's Offices, 26, Victoria Street, Grimsby, Lincolnshire.
Oct. 1909	*NETTELTON, OSCAR TRAVES	Public Works Department, Colombo, Ceylon.
Oct. 1903	*NETTEN, PERCY JOHN	16, Manor Street, Stonehouse, Devon.
Oct. 1894	*NEUBRONNER, HARRY ALFRED, A.R.I.B.A.	Penang, Straits Settlement.
Oct. 1908	*¶NEW, ELLIOTT JOHN	c.o. E. D. Till, The Priory, Eynsford, Kent.
Oct. 1907	*¶NEWBERY, GEORGE HERBERT	100, Mount Street, W.
Oct. 1904	*¶NEWBERY, WALTER SAMUEL	68, Grove Hill Road, Tunbridge Wells.
Oct. 1907	*NEWHOUSE, EDWARD	Public Works Department, Hong Kong.
Oct. 1902	*NEWINGTON, CALEB RICKMAN K.	County Hall, Lewes.
Oct. 1899	*¶NEWMAN, HENRY ARTHUR, A.M.I.C.E.	Council Offices, Church End, Finchley, N.
Oct. 1908	*NEWMAN, PERCIVAL CORNEY, A.R.I.B.A.	20, Copthall Gardens, Twickenham, Middlesex.
Oct. 1900	*NEWMAN, WALTER PHILIP	34, Solent Road, West Hampstead, N.W.
Oct. 1904	*¶NEWMAN, WILLIAM WALTER, A.M.I.C.E.	Council Offices, High Street, Watford, Hertfordshire.
Oct. 1903	*§NEWNHAM, FRANK GEORGE	Hillside, Orpington, Kent.
Oct. 1909	*NEWTON, JOHN LEES	The Chevin, Belper, Derbyshire.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
6015	Oct. 1910	*NICHOLLS, CHARLES WILLIAM ..	97, Brynmor Road, Swansea.
3163	Feb. 1897	*NICHOLSON, EBENEZER	1 and 2, Queen Street, Cheapside, E.C.
4761	Oct. 1905	*NICHOLSON, EDWARD.. ..	
5739	Oct. 1909	*NOBLE, WALTER HUBERT.. ..	Engineer's Office, Guildhall, E.C.
1556	Jan. 1889	*NOCKOLDS, MARTIN CHARLES HUBERT	Saffron Walden, Essex.
4485	Oct. 1904	*NORMAN, CHARLES FREDERICK ..	45, Lincoln's Inn Fields, W.C.
5830	Feb. 1910	*NORTH, HUGH FREDERIC	Strathfield Saye, Mortimer, Hampshire
4762	Oct. 1905	*NORTH, MARK FREDERICK.. ..	31, Westbourne Terrace, Hyde Park, W.
4763	Oct. 1905	*NOTTAGE, PERCY GEORGE.. ..	c/o George Chalmers, Esq., Villa Nova de Lima, Estado de Minas, Brazil.
4764	Oct. 1905	*NUTTALL, GEORGE PURCELL ..	Mount Sion, Manchester Road, Burnley, Lancashire.
5004	Oct. 1906	*NUTTER, HUBERT CHARLES ..	63, Sidney Street, Cambridge.
5230	Oct. 1907	*NUTTING, JOHN NAUNTON.. ..	Rosedale Villa, Lower Hillmorton Road, Rugby, Warwickshire.
4225	Oct. 1903	*NYE, HAYDN PERCIVAL	25, Gloucester Place, Brighton
3874	Oct. 1901	*OATEN, ALFRED EDWARD.. ..	9, Clare Street, Bristol.
5231	Oct. 1907	*ODAM, GEORGE MAXWELL.. ..	County Hall, Aylesbury, Buckinghamshire.
5512	Oct. 1908	*ODDY, JOSEPH RONALD RIDLEY ..	45, Horton Grange Road, Bradford, Yorks.
5232	Oct. 1907	*OFFLOW, ARTHUR ROWLAND ..	30, Berlin Road, Catford, S.E.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Feb. 1909	*¶ OGDEN, FREDERICK SORESBY ..	The Yews, Stanley, near Derby.
Oct. 1905	*¶ OLDFIELD, CLAUDE COURTENAY	66, London Road, King's Lynn, Norfolk.
Oct. 1909	*¶ OLDHAM, WILFORD	100, High Street, Eton, Bucks.
Oct. 1896	*¶ OLDNALL, ROGER WILLIAM, B.A. (<i>Cantab.</i>)	Portswood, Walliscote Road, Weston- Super-Mare, Somersetshire.
Oct. 1910	*¶ OPPENHEIM, ALFRED	57, Compayne Gardens, Hampstead, N.W.
Oct. 1902	* ORCHARD, ALFRED DEAN	Market Bosworth, Leicestershire.
Oct. 1898	* ORCHARD, SIDNEY SAMUEL ..	Creech St. Michael, Taunton, Somerset.
Feb. 1902	* O'REILLY, HENRY JAMES	Sans Souci, Booterstown, Co. Dublin.
Oct. 1910	*¶ ORR, ROBERT	Buildings Section, Secretary's Offices, G.P.O. (North), E.C.
Oct. 1903	* ORTON, WILLIAM GOODACRE ..	9, Gopsall Street, Leicester.
Oct. 1909	*¶ OSBORN, GEORGE	Ashleigh, Totley Brook Road, near Sheffield.
Nov. 1892	* OUVRY, PETER ARNOLD	The Salterns, Lymington, Hants.
Oct. 1907	* OVENDEN, HUGH	183, Tulketh Brow, Ashton, Preston, Lancs.
Oct. 1902	*¶ OWEN, HARRY BERTRAM	Hawthorne Cottage, Hartshill, Stoke- on-Trent.
Oct. 1909	* OWEN, JOHN	24, Handfield Road, Waterloo, Liver- pool.
Oct. 1909	* OWEN, TREVOR AP ROWLAND ..	"Sandy Nook," Seaforth, Liverpool.
Oct. 1906	*¶ PACKE, WILLIAM VERE	West Wickham, Kent.
Oct. 1904	* PAGE, BERNARD CULMER	9, Denman Street, London Bridge, S.E.
Oct. 1904	* PAGE, EDMUND	Bedford Estate Office, Tavistock, Devonshire.
Oct. 1904	* PAGE, HERBERT	Messrs. Harland and Son, Barnet, Hertfordshire.
Oct. 1905	* PAGE, JOSEPH	Grove House, Upper Wortley Road, Leeds.
Oct. 1897	* PAICE, WILLIAM, JUN.	Wentworth Cottage, Virginia Water, Surrey.
Oct. 1909	*¶ PAIN, COARD HENRY	Bebington, Cheshire.
Oct. 1894	*¶ PAIN, WILLIAM HENRY	Carnarvon Estate Office, Bingham, Nottinghamshire.
Oct. 1910	PALMER, ALFRED GEORGE BENJAMIN	156, Westcombe Hill, Blackheath, S.E.

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4309	Feb. 1904	*¶PALMER, ARTHUR	Town Hall, Greenwich, S.E.
4767	Oct. 1905	*PALMER, CHARLES DRAYTON ..	208, Unthank Road, Norwich.
5234	Oct. 1907	*PALMER, FREDERICK CHARLES..	20, Connaught Avenue, Mortlake, S.W.
5235	Oct. 1907	*PALMER, SIDNEY	Glen-eyre, Church Walk, Thame Ditton, Surrey.
5513	Oct. 1908	*PALMOUR, FREDERICK JOHN CLIFFORD	Bank House, Latham Street, Preston Lancs.
6018	Oct. 1910	*PANARIO, FRANCIS MICHAEL ..	327, Queen's Road, Battersea Park, S.W.
5831	Feb. 1910	*PARAMOR, WILLIAM	c o T. W. Watkins, 23, Old Queen Street S.W.
6019	Oct. 1910	*PARKER, ARCHIE MONTGOMERY..	1, Trouville Road, Clapham Park, S.W.
5236	Oct. 1907	*PARKER, CHARLES GOODE.. ..	Howarth, Banstead Road, Belmont Surrey.
6020	Oct. 1910	*PARKER, FRANK GRANGER.. ..	Mildenhall, Suffolk.
3719	Oct. 1900	*¶‡PARKER, FREDERIC WILLIAM	Parks Department, London County Council, 11, Regent Street, S.W.
3720	Oct. 1900	*PARKER, HOWARD	Maple Creek, Assiniboia, Canada.
5237	Oct. 1907	*¶PARKER, JOHN	Rating Office, London and South Western Railway, Addington Street Waterloo Station, S.E.
4491	Oct. 1904	*¶PARKER, WILFRED HORSLEY ..	The Garth, Stanmore, Middlesex.
4045	Oct. 1902	*¶PARKINSON, HERBERT	392, High Street, Rochester.
2979	Oct. 1895	*PARKS, WALTER	17, Holmesdale Gardens, Hasting Sussex.
3251	Oct. 1897	*PARNACOTT, ARTHUR CHARLES..	93, York Road, Westminster Bridge Road, S.E.
5514	Oct. 1908	*¶PARRATT, ALBERT MARTIN.. ..	The Oaks, Half Moon Lane, Herne Hill S.E.
5007	Oct. 1906	*¶PARRATT, OSWALD ESTCOTT ..	17, Southampton Street, Bloomsbury Square, W.C.
4768	Oct. 1905	*PARSONS, ARTHUR STANLEY ..	4, Hillaries Road, Gravelly Hill Erdington, Warwickshire.
6021	Oct. 1910	*PASCOE, HERBERT	County Hall, Wakefield, Yorks.
5745	Oct. 1909	*PASCOE, JOHN BARRON	"Tregothnan," Eaton Grove, Swansea
5746	Oct. 1909	*¶PATCHING, EDWARD GLENCAIRN	46, London Road, East Grinstead Sussex.
5576	Feb. 1909	§*PATEY, GEORGE HEAD	3 and 5, Station Road, Watford, Hertfordshire
5239	Oct. 1907	*PATON, JOSEPH TRAIN	Callendar Estate Office, Callendar Park Falkirk, N.B.
5008	Oct. 1906	*PATON, HUGH	Rose Cottage, Syston Park, Grantham
4048	Oct. 1902	*PATISSON, WILLIAM HENRY MUNNINGS	Estate Office, Helmingham, Suffolk
5240	Oct. 1907	*¶PAUL, FRANCIS	45, Chatsworth Gardens, Acton, W.
6022	Oct. 1910	*PAUL, GEORGE GARNHAM	Gunton Park, Norwich.
2980	Oct. 1895	*PAUL, JOHN WILLIAM	31, Bedford Row, W.C.
5747	Oct. 1909	*PAWLEY, TOM EDMUND	24, Stone Street, Maidstone.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1907	*PAXTON, ARCHIBALD PHILIP ..	14, Grand Parade, Coombe Lane, Kingston-on-Thames, Surrey.
Oct. 1904	*PAYNE, JOHN OSWALD	Mill House, Keston, Hayes, Kent.
May 1875	PAYNE, WILLIAM PERCY	Holmesdale, The Park, Nottingham.
Oct. 1909	*PEAKE, ALBERT EDWARD	County Council Offices, Downham Market, Norfolk.
Oct. 1896	*PEARCE, CHARLES FREDERICK ..	71, Edgware Road, W.
Apr. 1884	PEARCE, FREDERICK WILLIAM ..	34, Gloucester Road, Finsbury Park, N.
Oct. 1903	*PEARCE, STEPHEN HARVEY ..	Architect's Department, L.C.C., Spring Gardens, S.W., and Polruan, Conway Road, Southgate, N.
Feb. 1906	*PEARCE, WILLIAM HENRY, A.M.I.C.E. .. .	4, Southcourt Road, Worthing, Sussex.
Oct. 1906	*PEARCH, DOUGLAS DAVISSON ..	134, Ladywell Road, Lewisham, S.E.
Oct. 1903	*PEARMAN, FRANCIS MAY	Flagstaff Post Office, Alberta, Canada.
Oct. 1910	*PEARSON, GEORGE PARKER ..	Sutton Bonington, near Loughborough, Leicestershire.
Oct. 1910	*PEARSON, NORMAN HANSON ..	52, Percy Park, Tynemouth, Northumberland.
Oct. 1902	*PEARSON, THOMAS GIBSON ..	Town Hall, Barrow-in-Furness, Lancashire.
Oct. 1909	*PEAT, FREDERICK JAMES	Valuers' Department, Reigate Hill, Reigate, Surrey.
Feb. 1894	*PEGGE, JOHN THOMAS	City Surveyor's Office, Durham.
Oct. 1907	*PEIRCE, RICHARD GEORGE	24, Stafford Road, Brighton.
Oct. 1907	*PEMBERTON, BASIL CHARLES ..	59 and 60, West Stockwell Street, Colchester.
Oct. 1903	*PEMBERTON, PERCY LEIGH	22, Warwick Square, S.W.
Oct. 1910	*PENNINGTON, STANLEY MUNCASTER	"Sandfield House," Hawthorn Road, Bootle, Lancs.
Oct. 1901	*PENROSE, EDWARD ALEC	Estate Office, Rose Lane, Waterford, Ireland.
Oct. 1896	*PEPPERCORN, JOHN ARTHUR ..	Eaton Socon, St. Neots, Huntingdonshire.
Oct. 1906	*PERCIVAL, ALEXANDER WILLIAM	Box 135, Eglinton Ontario, Canada
Oct. 1909	*PERCIVAL, FRANK NEVILLE ..	Eastwood, Agnew Street, Lytham, Lancashire.
Oct. 1902	*PERKIN, DANIEL WARD	P.O. Box 1, Knights, South Africa.
Nov. 1890	*PERKINS, JOSEPH	86, Willows Road, Balsall Heath, Birmingham.
Oct. 1906	*PERKINS, SAMUEL BARCLAY ..	33, Emma Place, East Stonehouse, Plymouth.
Apr. 1887	*PERKS, SYDNEY, F.R.I.B.A. ..	The Guildhall, E.C.
Oct. 1900	*PERRINS, GEORGE LATHAM ..	13, Cambridge Road, Lytham, Lancashire
Oct. 1904	*PERRY, CHARLES WILLIAM ..	7, St. John's Park Mansions, Pemberton Gardens, N.

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5518	Oct. 1908	*PETER, ARTHUR GRANVILLE ..	Northernhay, Launceston, Cornwall.
5012	Oct. 1906	*PETER, FRANCIS	Ham Villa, Berkeley, Gloucestershire.
4310	Feb. 1904	*PETERS, GEORGE FARMER JAMES	The Railway Station, Byfleet, Surrey.
4769	Oct. 1905	*PETRIE, ALAN ROY	Messrs. Daniel Watney and Sons, 31 Poultry, E.C.
5751	Oct. 1909	*PETTINGALE, CHARLES EDWARD	63, Fanfield Road, Birkby, Huddersfield.
1021	Dec. 1883	PEWTRESS, HERBERT WILMSHURST	15, Cursitor Street, Chancery Lane, W.
1129	Mar. 1884	PHILLIPS, GEORGE CAWKWELL ..	Chelmsford.
2705	Oct. 1894	*PHILLIPS, FRANCIS JOHN	Albury, Queen's Road, Springfield, Chelmsford.
6026	Oct. 1910	*PHILLIPS, SYDNEY VERNON ..	The Cottage, Yardley Wood Road, Moseley, Birmingham.
1448	Jan. 1888	*PHILLIPS, WILLIAM DEARLOVE ..	High Wycombe, Bucks.
5245	Oct. 1907	*PHILLIPS, WILLIAM NEWTON ..	Cawdor Estate Office, Carmarthen.
4235	Oct. 1903	*PHILPOT, CLIFFORD NEEDHAM	Crockham Hill, Edenbridge, Kent.
5246	Oct. 1907	*PICKFORD, ARTHUR ERNEST ..	
5752	Oct. 1909	*PIERCE, EDWARD LEMUEL	Bickley, Kent.
4497	Oct. 1904	*PILBEAM, FRANCIS NEWCASTLE ..	24, Aldbourne Road, Acton Vale, W.
4498	Oct. 1904	*PILKINGTON, JAMES MONTEATH ..	Foxley, Heming Road, Edgware, Middlesex.
4236	Oct. 1903	*PINCKNEY, HENRY CHRISTOPHER	The Estate Office, Stoodleigh, Tiverton, Devonshire.
3254	Oct. 1897	*PINFOLD, FRANCIS ARTHUR ..	Estate Office, L.B. and S.C. Ry., London Bridge Terminus, S.E.
3723	Oct. 1900	*PINSON, GILBERT	Cobden Buildings, Corporation Street, Birmingham.
4770	Oct. 1905	*PITT, JOSEPH HENRY	14, Harvist Road, Brondesbury Road, N.W.
4053	Oct. 1902	*PITTS, FRANK ERNEST	92, Shaftesbury Avenue, W.
5753	Oct. 1909	*PLANT, CLIFFORD ERNEST	The Cedars, Clayton, Newcastle, Staffordshire.
3725	Oct. 1900	*PLANT, WILLIAM, A.M.I.C.E. ..	Borough Hall, Stafford.
5013	Oct. 1906	*PLUMB, FRANCIS CLARKSON ..	Heath Drive, Gidea Park, Romford, Essex.
5014	Oct. 1906	*PLUMSTEAD, HENRY WILLIAM LEWIS	126, The Avenue, Highams Park, N.E.
4054	Oct. 1902	*POLLOCK-HODSOLL, HAROLD EDWARD	22, Pembridge Mansions, W.
5764	Oct. 1909	*POLLEY, GORDON	163, Balaam Street, Plaistow, E.
6027	Oct. 1910	*POORE, JOHN	Hunstrete Estate Office, Pensford, Bristol.
4771	Oct. 1905	*POPE, HERBERT BURGHAM ..	Thames Bank House, Lower Harpenden Road, Kingston-on-Thames, Surrey.
5088	Feb. 1907	*PORTER, EVELYN DE BOCK ..	Inland Revenue, District Valuer's Office, Finsbury Park, N.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1903	*PORTER, SYDNEY LAWRENCE ..	12 and 13, Bow Lane, E.C.
Oct. 1908	*POTTER, EDWARD	198, Bedford Hill, Balham, S.W.
Oct. 1910	*POTTIER, ALFRED	235, Shernhall Street, Walthamstow, E.
Feb. 1911	*POTTS, GILBERT ACKROYD ..	34, Victoria Buildings, Victoria Street, Manchester.
Oct. 1905	*POVEY, STEPHEN GODDARD ..	Messrs. Talbot and White, 9, Hamlet Court Road, Westcliff-on-Sea, Essex.
Oct. 1906	*POWELL, WALLACE GERALD ..	City Engineer's Office, Norwich.
Oct. 1905	*POWER, PERCY TOMES	Egham, Surrey.
Oct. 1904	*POWER, RICHARD REILLY ..	Director of Works Department, Admiralty, S.W.
Feb. 1900	*PRATT, FRANK PERCY	9, Eastern Road, Romford, Essex.
Oct. 1907	*PRATT, JERMYN HAROLD	Ryston Hall, Downham, Norfolk.
Oct. 1909	*PRESTON, ERIC WATSON	Curlew Hope, Weybridge, Surrey.
Oct. 1905	*PREVATT, FRANCIS CHRISTOPHE	163, Belmont Circular Road, Port-of-Spain, Trinidad, West Indies.
Feb. 1898	*PRICE, CAPEL HEReward	89, Parliament Hill Mansions, Lissenden Gardens, N.W.
Oct. 1909	*PRICE, DANIEL HENRY	Frisco Villa, Mountain Ash, Glam.
Oct. 1907	*PRICE, JOHN ROWLAND	The Elms, Sandbach, Cheshire.
Oct. 1907	*PRICE, REGINALD HENRY KING	3, Manor Park, Redland, Bristol.
Oct. 1908	*PRICE, ROBERT HENRY, M.R.A.C.	65, Cloudesdale Road, Balham, S.W.
Oct. 1910	*PRICE, WILLIAM HARRY LYNE ..	6, Byron Villas, Knighton Park Road, Sydenham, S.E.
Oct. 1901	*PRIEST, ALBERT EDWARD	Temple Courts, 55, Temple Row, Birmingham.
Oct. 1908	*PRIOR, ARTHUR SPARKS	101, Park Road, Norbiton, Surrey.
Oct. 1904	*PRITCHARD, ANDREW BADEN ..	Valuer's Office, 28, High West Street, Dorchester.
Feb. 1907	*PROCTER, CLAUDE HORACE ..	Messrs. Giddy and Giddy, Maidenhead, Berks.
Dec. 1889	*PUCKRIDGE, PERCIVAL MARTIN ..	Milton Pewsey, Wilts.
Oct. 1907	*PULFORD, LEONARD CYRIL	The Cedars, Addiscombe, Surrey.
Oct. 1909	*PUNCHARD, THOMAS WILLIAM ..	3, Westbourne Terrace, Lancaster.
Feb. 1908	*PURSEY, CHARLES	High Park, Ryde, Isle of Wight.
Oct. 1910	*PUSSER, DANIEL ROBERT	252, Old Kent Road, S.E.
Oct. 1895	*PYE, GEORGE HENRY	Rocklyn, Barkers Lane, Ashton-on-Mersey, Cheshire.
Oct. 1904	*QUARMBY, CHARLES DAVID ..	64, Crescent Lane, Clapham, S.W.

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5758	Oct. 1909	*RADBURN, SYDNEY CHARLES ..	39, Earlsfield Road, Wandsworth Com- mon, S.W.
4503	Oct. 1904	*RAFFETY, PERCY CHARLES ..	30, High Street, High Wycom- Buckinghamshire.
1289	Dec. 1885	*RAND, JOHN	66, Chancery Lane, W.C.
6031	Oct. 1910	*RANDALL, AUGUSTINE ST. GEORGE	Derby House, Nottingham.
5759	Oct. 1909	*RANDALL, ERNEST SMITH ..	Elm House, New Road, Chatham, Ken
5018	Oct. 1906	*RANDALL, WILLIAM EDWARD RENWELL, JUN.	171, High Street, Chatham.
5523	Oct. 1908	*RANKIN, ERNEST ALFRED ..	Somerville, Bourton, Dorset.
3581	Oct. 1899	*RANSOM, THOMAS REGINALD ..	28, Cadogan Place, Belgrave Square S.W.
4854	Feb. 1906	RANSOM, WILLIAM	81, Bath Road, Worcester, and Ci- Engineer's Office, Guildhall, Wc- cester.
5019	Oct. 1906	*RATCLIFF, SIDNEY ARTHUR ..	61, Cleveland Square, Lancaster Gate,
4504	Oct. 1904	*RAWLENCE, DUNCAN ALFRED ..	Newlands, London Road, Salisbury.
5020	Oct. 1906	*RAWLENCE, GEORGE NORMAN ..	Newlands, London Road, Salisbury.
3416	Oct. 1898	*RAWSTRON, CHARLES OLIVER ..	Lichfield Rural District Council, B- irmingham Road, Lichfield, Staffor- shire.
4241	Oct. 1903	*RAYMOND, JAMES OWEN ..	Western Road, Tring, Herts.
5252	Oct. 1907	*RAYMOND, WALTER LESLIE ..	The Estate Office, Golder's Green, N.
6032	Oct. 1910	*RAYSON, WILLIAM JAMES ..	Clarence House, Clarence Street, Southend-on-Sea, Essex.
5253	Oct. 1907	*REAVELL, CHARLES ASQUITH ..	54, Grasmere Road, Muswell Hill, N.
3417	Oct. 1898	*REDFERN, CHARLES FREDERICK	Whitehall Chambers, 23, Colmore Row Birmingham.
4506	Oct. 1904	*REDFERN, HERBERT WILLIAM ..	20, Mill Street, Bedford.
4243	Oct. 1903	*REED, EDWARD B.	Public Works Department, Hong Ko
3887	Oct. 1901	*REES, WILLIAM HAROLD ..	154, Croydon Road, Anerley, S.E.
4776	Oct. 1905	*REEVE, GARNET NORMAN ..	Springfield Lodge, Dean Road Croydd
6033	Oct. 1910	*REID, ROBERT DONALD ..	4 Barfillan Terrace, Paisley Road Wes- Glasgow.
5760	Oct. 1909	*RENTON, THEADORE ROLANDE VICTOR	2, Queen Parade, Harrogate.
5254	Oct. 1907	*REYNOLDS, ARTHUR HUGH ..	Holton, Blundellsands, Liverpool.
4507	Oct. 1904	*RICE, BENJAMIN LOUIS ..	17, Dale Street, Liverpool.
6034	Oct. 1910	*RICE, EDWARD	15, Mostyn Road, Brixton, S.W., and Cromwell Place, S.W.
5524	Oct. 1908	*RICHARDS, ARTHUR WALTER TROLLOPE	15, Wontner Road, Balham, S.W.
5525	Oct. 1908	*RICHARDS, DANIEL HERBERT ..	1, Mellor Road, Prenton, Birkenhead Cheshire.
5526	Oct. 1908	*RICHARDS, JOHN SYDENHAM ..	9, Gore Terrace, Swansea.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1909	*§ RICHARDS, ROBERT HERBERT ..	Estate Office, Canwell, Sutton Coldfield, Warwickshire.
Oct. 1899	* RICHARDSON, ERNEST EDWARD ..	5, John Street, Bedford Row, W.C.
Oct. 1905	* RICHARDSON, GEORGE	29, Athol Street, Middlesbrough, Yorkshire.
Feb. 1903	* RICHARDSON, HENRY	
Oct. 1907	* RICHARDSON, JOHN STOCKS ..	East Parade Chambers, Leeds.
Oct. 1906	* RICHARDSON, WILLIAM EDWARD	9, Goldhurst Terrace, South Hampstead, N.W.
Oct. 1907	* RICKARDS, CLEMENT ARCHBOLD ROSS	Restalrig, Woodlesford, near Leeds.
Oct. 1904	* RIDDETT, BASIL PERRY	40, Vereker Road, West Kensington, W.
Oct. 1899	* RIDDETT, MAURICE CHARLES ..	Town Hall Chambers, Ryde, Isle of Wight.
Oct. 1906	* RIDER, SYDNEY FRANKLIN ..	37, Bramley Road, Notting Hill, W.
Oct. 1910	* RIGBY, REGINALD	Rose Bank, Prestwich, Manchester.
Oct. 1909	* RIGGALL, JABEZ ALLAN	Heck House, Grimsby, Lincolnshire.
Oct. 1909	* RIGHTON, CHARLES SHIRT ..	St. Martin's Road, Marple, Cheshire.
Feb. 1904	* RINGLAND, WILLIAM EWART ..	8, Wellington Road, St. John's Wood, N.W.
Oct. 1904	* RIPPON, HERBERT	17, North Avenue, West Ealing, W.
Oct. 1909	* RISDON, JOHN PEART	Wiveliscombe, Somerset.
Oct. 1896	* RIVERS, CHARLES EDWIN	Municipal Offices, Harrogate, Yorkshire.
Oct. 1904	* RIVERS, FRANK WILFRED	33, Colehill Gardens, Fulham Palace Road, S.W.
Oct. 1898	* ROBBINS, WALTER FRANCIS ..	Crawley, Sussex.
Oct. 1908	* ROBERTS, ARTHUR ATHERTON ..	1, Lombard Flats, Ashley Road, Boscombe, Hampshire.
Oct. 1909	* ROBERTS, CHARLES MINTO	17, Bedford Row, W.C.
Oct. 1904	* ROBERTS, EDWARD LAMPLOUGH	Brantwood, Kenwood Bank, Sheffield.
Oct. 1910	* ROBERTS, FREDERICK LEONARD	"Catterall," Chestnut Avenue, Hampton-on-Thames, Middlesex.
Oct. 1901	* ROBERTS, JOHN	Churton Villa, Tarvin Road, Chester.
Oct. 1905	* ROBERTSON, CHARLES BOYD ..	Faskally Estate Office, Pitlochry, N.B.
Oct. 1898	* ROBERTSON, HENRY CHARLES ..	2, The Broadway, Church End, Finchley, N.
Oct. 1910	* ROBERTSON, WILLIAM ANDREW	Purley, Dagmar Grove, Alexandra Park, Nottingham.
Oct. 1907	* ROBINSON, FRANCIS WALTER ..	30, Halford Road, Richmond, Surrey.
Oct. 1905	* ROBINSON, HAROLD LAYTON ..	8, York Road, Ealing, W.
Oct. 1905	* ROBINSON, JAMES CHARLES EVITT	Marsh Leys, Kempston, Bedford.

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5528	Oct. 1908	*ROBINSON, LESLIE	1, Station Road, Balham, S.W.
803	Apr. 1882	ROBINSON, MARTIN CATLIN ..	Wenden, Saffron Walden, Essex.
4783	Oct. 1905	*RODWELL, LIONEL HELM ..	The County Hall, Ipswich.
6038	Oct. 1910	*ROFF, HENRY GRIFFITHS ..	34, Carew Road, Thornton Heath, Sur
5259	Oct. 1907	*ROGERS, EDGAR ARTHUR ..	93, Henniker Gardens, East Ham, E
5529	Oct. 1908	*ROGERS, JOHN	1, Talbot Street, Llanelly, S. Wales.
5260	Oct. 1907	*ROGERS, JOHN RUSSELL ..	6, High Street, Maldon, Essex.
4784	Oct. 1905	*ROGERS, LEONARD SAMUEL ..	"Aberglaslyn," Birdhurst Rise, Croyd
4513	Oct. 1904	*ROGERS, MONTAGU STANLEY ..	78, Gloucester Road, South Kensington S.W.
5530	Oct. 1908	*ROLFE, CHARLES BERTRAM ..	Messrs. J. R. Eve and Son, 45, Park ment Street, S.W.
5024	Oct. 1906	*RONALD, THOMAS ROWAN..	72, Victoria Street, S.W.
6039	Oct. 1910	*ROOME, FRANK MORRIS ..	13, St. Martin's Street, Chichester.
4514	Oct. 1904	*ROPER, JOHN WILLIAM ..	90, Cannon Street, E.C.
1130	Mar. 1884	ROSE, EDWARD JOSEPH ..	58, Corn Market Street, Oxford.
4246	Oct. 1903	*ROSEVEAR, JOHN ASHBURNHAM..	109, New King's Road, Fulham, S.W.
5090	Feb. 1907	*ROWE, ALFRED VERNON ..	Worcester Chambers, Worcester.
4588	Feb. 1905	*ROWE, GILBERT CHARLES..	8, Philpot Lane, E.C.
4785	Oct. 1905	ROWLAND, HAROLD EVANS ..	2, Station Approach, Purley, Surrey
5025	Oct. 1906	*ROWLAND, WILLIAM JOHN W. ..	Lower Farm, Shabbington, Thanet Oxon.
247	Oct. 1903	*ROWLANDSON, GEORGE ARM- STRONG	5, Lonsdale Street, Carlisle.
1695	Jan. 1890	*ROWLEY, WILLIAM TAYLOR ..	Royston, Hertfordshire.
5360	Feb. 1908	*ROYDS, GEORGE FREEMAN ..	District Valuer's Office, Inland Revenue Dorchester.
4787	Oct. 1905	*ROYDS, HENRY GEORGE TROWER	Burghley Estate Office, Stamford, Lin- colnshire.
5361	Feb. 1908	*RUAULT, CLAUDE EDWYN..	15, Great James Street, Bedford Row, W.C.
5766	Oct. 1909	*RUBINSTEIN, ISAAC	120, Highbury New Park, N.
4061	Oct. 1902	*RUDDLE, GEORGE WILLIAM ..	233, Brockley Road, S.E.
6040	Oct. 1910	*RUDLER, FREDERICK GEORGE ..	Piercefield, Ennerdale Road, Richmond Surrey.
4517	Oct. 1904	*RULE, THOMAS	East African Cotton Syndicate, Ltd. Tana Valley, Via Lamu, British East Africa.
5026	Oct. 1906	*RUMSBY, WALTER SAMUEL ..	Winchester House, Fir Vale Road, Bournemouth.
4248	Oct. 1903	*RUSH, ARTHUR LESLIE ..	65, High Street, Tunbridge Wells.
4518	Oct. 1904	*RUSS, ERNEST	25, Gloucester Place, Brighton.
4249	Oct. 1908	*RUSSELL, HUMPHREY GLAD- STONE	28, Martin's Lane, Cannon Street, E
3772	Feb. 1901	*RUTLEY, ARTHUR DENNETT ..	Norcot, Oxted, Surrey.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1899	*RUTTER, ARTHUR LIONEL, M.A. (<i>Cantab.</i>)	63, Sidney Street, Cambridge.
Oct. 1906	*†RUTTER, VALLANCEY ARTHUR..	Hastings House, 10, Norfolk Street, Strand, W.C.
Oct. 1904	*RYAN, JOHN A., A.M.I.C.E. (<i>Ireland</i>)	Catherine Street, Waterford.
Oct. 1905	*†RYDE, EDWARD HUMPHREY NOEL	49 and 50, Parliament Street, S.W.
Oct. 1905	*†RYDE, JOHN TITCOMB.. . . .	49 and 50, Parliament Street, S.W.
Oct. 1907	*†RYLAND, LORENCE	Treherne, Chalk Hill, Bushey, Herts.
Oct. 1909	*†RYLATT, WALTER PUCKERING . .	249, Beverley Road, Hull.
Oct. 1903	*SACKETT, SIDNEY RUPERT.. . .	96A, North View Road, Hornsey, N.
Oct. 1910	*SADLEIR, HAROLD FRANC	Ryton, Dymock, Gloucestershire.
Oct. 1902	*†SAINSBURY, WILLIAM CHARLES..	20, Narcissus Road, West Hampstead, N.W.
Oct. 1897	*ST. AUBYN, BELVILLE MOLES- WORTH, B.A. (<i>Oxon.</i>)	Stopham Estate Office, Toat, Pul- borough, Sussex.
Oct. 1907	*†ST. QUINTIN, CLIFFORD JACK . .	50, Threadneedle Street, E.C.
Oct. 1893	*SALE, ARTHUR REED	St. Peter's Rectory, Port Elizabeth, Cape Colony.
Oct. 1903	*†SALMON, JOSEPH HAROLD	Valuer's Department, 5, Lyndhurst Road, Peckham, S.E.
Oct. 1901	*SALT, LEONARD EUSTACE	The Mount, Shrewsbury.
Oct. 1906	*SALTER, WILLIAM	G. E. R. Land Agent's Office, Liverpool Street Station, E.C.
Oct. 1907	*SALTER, WILLIAM ERIC	25, Thorpe Road, Norwich.
Oct. 1903	*†SALWEY, ARTHUR	The Cedars, Broxbourne, Herts.
Oct. 1909	*†SANDERS, JOHN ROBERT	63, Normanby Road, Dollis Hill, N.W.
Feb. 1902	*†SANDS, HUBERT COVELL	Amhurst, Ginbal Road, Lee, S.E.
Feb. 1903	*†SANSOM, WILLIE STANLEY VENN	71, East Hill, Colchester, Essex.
Oct. 1904	*†SARGANT, FRANK ELLISON.. . .	90, North Side, Wandsworth Common, S.W.
Oct. 1908	*SARGENT, AUGUSTUS MONTAGUE	Valuer's Office, 28, High West Street, Dorchester.
Feb. 1890	*SACHELL, HERBERT A., F.R.I.B.A.	3, Staple Inn, W.C.
Feb. 1910	*†SAUNDERS, CLEMENT	Inland Revenue Valuation Offices, Hammet Street, Taunton.
Oct. 1900	*†SAUNDERS, EDGAR WALTER . . .	108, Stapleton Hall Road, Stroud Green, N.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
5265	Oct. 1907	*SAUNDERS, EDWARD YOUNGS ..	Borough Surveyor's Office, Barnstaple Devon.
6042	Oct. 1910	*SAUNDERS, LESLIE	32, Upper Rock Gardens, Brighton.
4254	Oct. 1903	*SAVAGE, TOM ALBERT	55, Mills Hill Road, Middleton Junction Manchester.
6044	Oct. 1910	*||SAWARD, SIDNEY CARMAN ..	Land Agent's Office, G.E. Railway Liverpool Street Station, E.C.
6045	Oct. 1910	*SAYER, HARVEY ROBERT	45, Choumert Road, Peckham, S.E.
5769	Oct. 1909	*||SCALES, ARTHUR ALFRED	Valuation Department, Inland Revenue Nottingham.
1791	Oct. 1905	*SCAMMELL, THOMAS EDWARD ..	10, John Street, Bristol.
5532	Oct. 1903	*||SCANTLEBURY, WILLIAM SETH ..	21, Vesta Road, Brockley, S.E.
5533	Oct. 1903	*||SCARLETT, JOHN WALTER, JUN.	Beechcroft, Newington, Ramsgate, Kent.
5267	Oct. 1907	*||SCEATS, DOUGLAS BRIANT	9, Myddleton Road, Bowes Park, N.
6046	Oct. 1910	*SCHILLING, JOHN FRANCIS	Walcot House, near Wellington Shropshire.
3732	Oct. 1900	*SCHOFIELD, PETER	County Highway Department, 49, Regent Street, Lancaster.
5268	Oct. 1907	*||SCHOLES, JOHN GREAVES	Samlesbury Vicarage, Preston, Lancs.
4792	Oct. 1905	*SCHROEDER, EDWARD	Housing Department, London County Council, 116, St. Martin's Lane, W.C.
3422	Oct. 1893	*SCOBLE, HERBERT THOMAS	28, Victoria Street, S.W.
2712	Oct. 1894	*SCORER, ALFRED GEORGE	Hillcrest, Chilworth, Guildford.
5770	Oct. 1909	*SCOTLAND, DOUGLAS WILLIAM ..	Agricultural Department, Freetown Sierra Leone, West Africa.
4523	Oct. 1904	*SCOTT, JAMES COSPATRICK	4, The Square, Kelso, N.B.
5771	Oct. 1909	*SCOTT, LESLIE	47, Carlton Mansions, Stamford Hill, N.
5269	Oct. 1907	*SCOTT, WALTER FENIMORE VAUGHAN	61, Via Duomo, Naples, Italy.
3023	Jan. 1896	*||SCRIVENER, JOHN CHARLES	70, Queen Street, Cheapside, E.C.
5270	Oct. 1907	*SCRIVEN, JOHN PEARCE	City Surveyor's Office, Guildhall, E.C.
4793	Oct. 1905	*SEAGO, RALPH WOLLASTON	Custom House Buildings, Lowestoft Suffolk.
4256	Oct. 1903	*SEALE, PERCY JAMES	Estate Offices, Oxted, Surrey.
5029	Oct. 1906	*SEARING, GEORGE THOMAS	4, Carrington Road, Dartford, Kent.
5271	Oct. 1907	*||SEDGWICK, PERCY GEORGE	1, Lewisham Hill, S.E.
2468	Nov. 1891	*SEDGWICK, RUPERT WILLIAM ..	38, High Street, Watford, Herts.
1729	Feb. 1890	*SELBY, FRANK	44, Chancery Lane, W.C.
1234	Dec. 1884	*§SELBY, JOHN BASELEY	Atherton Hall, Leigh, near Manchester.
3733	Oct. 1900	*SELLER, FRANK RUSSELL	Hamilton House, Victoria Embankment E.C.
5272	Oct. 1907	*||SEWELL, FRANK HERSEY	26, Croom's Hill, Greenwich, S.E.
4534	Oct. 1904	*SHARMA, LAKSHMI CHAND	Director of Agriculture, Kashmir State Srinagar, Kashmir.
4794	Oct. 1905	*SHARP, HERBERT FIRTH	1, Briggs Villas, Queensbury, Bradford.
5535	Oct. 1903	*||SHARPLESS, ARTHUR	Granville, Victor Drive, Leigh-on-Sea Essex.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Dec. 1887	*SHAW, ARTHUR	Ramsden Estate Offices, Railway Street, Huddersfield, Yorkshire.
Oct. 1907	*||SHAW, CHARLES WILLIAM.. ..	Church Street Chambers, Dewsbury, Yorkshire.
Oct. 1908	*SHAW, FREDERICK JOHN	1, Craig Street, Lincoln Road, Peterborough, Northamptonshire.
Oct. 1908	*SHEARBURN, WILLIAM IVERY ..	Roseneath, Dorking, Surrey.
Oct. 1897	*SHEARER, JAMES HUGHAN, A.R.I.B.A.	Stuckey's Bank Chambers, 253, High Street, Exeter.
Oct. 1910	*SHEDDEN, EDWARD CLAUDE ..	Cowlinge, Newmarket, Cambridgeshire
Oct. 1898	*||SHELDON, HAROLD	Kinderton Street, Middlewich, Cheshire.
Oct. 1905	*||SHEPHARD, JOSEPH ERNEST ..	274 and 275, Upper Street, Islington, N.
Oct. 1905	*SHEPHERD, EDMUND THOMAS ..	Guildford Street, Chertsey, Surrey.
Oct. 1906	*SHEPPARD, JOHN MORTIMER ..	39, Bloomsbury Square, W.C.
Apr. 1884	SHERRY, NATHANIEL	45, Fenchurch Street, E.C.
Feb. 1909	*||SHERWIN, CYRIL JOSEPH	94, North Side, Wandsworth Common, S.W.
Oct. 1904	*||SHERWIN, HENRY EDWARD ..	7, Little College Street, Westminster Abbey, S.W.
Oct. 1900	*SHETTLÉ, EDWARD GURNEY ..	6, Princes Street, Yeovil, Somerset.
Oct. 1901	*||SHIPWRIGHT, WILLIAM GEORGE	3, Warwick House St., Charing Cross, S.W.
Oct. 1910	*SHIRLEY, HENRY TOWNSEND ..	Dalraddie, Calder Road, Mossend, N.B.
Oct. 1897	*SHORNEY, ARTHUR SHEPHERD..	Haywards Farm, Theale, near Reading.
Feb. 1910	*||SHORT, JOHN RODWELL	Brunswick House, The Mall, Kensington, W.
Oct. 1903	*||SHOTTON, JOHN SIDWELL	9, South Park Hill, Croydon.
Oct. 1910	*§SHROSBREE, ALBERT DE BOIS ..	Valuer's Office, 16, St. Mark's Hill, Surbiton, Surrey.
Oct. 1910	*SHUTTLEWORTH-KING, CHARLES JOHN	St. Clement's House, Worcester.
Oct. 1909	*||SICH, PERCY BERTRAM WARDELL	Norfolk House, The Mall, Chiswick, W.
Oct. 1909	*||SIMMONS, FRANK WORTLEY ..	Eastrop Fields, Basingstoke, Hampshire
Oct. 1910	*SIMPSON, CHRISTOPHER	c.o. B. A. Cunliffe, P.O. Box 1223, Vancouver, British Columbia.
Oct. 1907	*||SIMPSON, FRANCIS ALEXANDER..	Valuer's Department, Inland Revenue, Shannon Court, Bristol.
Oct. 1897	*SIMPSON, LESLIE SHEPHERD ..	27 and 28, Market Place, Reading.
Feb. 1911	*SIMS, NUGENT WOOLCOTT.. ..	25, Greenhill Road, Harlesden, N.W.
Oct. 1909	*||§SISSONS, WILLIAM WYRILL ..	Waterloo Manor, Garforth, near Leeds.
Oct. 1894	*SKEAT, ARTHUR PERCIVAL.. ..	Londonderry, Dominica, British West Indies.
Oct. 1909	*SKEEN, ERNEST ALEXANDER ..	9, Foxbourne Road, Upper Tooting, S.W.
Oct. 1905	SKEFFINGTON, THOMAS ASHFORD	Office of Director of Barrack Construction, Abbassia, Cairo, Egypt.
Oct. 1904	*||SKELT, FREDERICK MITCHELL..	62, Bulwer Road, Leytonstone, E.
Dec. 1882	SKINGLE, ALFRED	29, Fleet Street, E.C.
Feb. 1897	* SKINGLE, ALFRED CHARLES ..	Valuer's Office, 5, Lyndhurst Road Peckham, S.E.

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5538	Oct. 1903	*SKITT, ARTHUR HOWARD WAKEM	28, London Street, Greenwich, S.E.
4527	Oct. 1904	*SLADDIN, ARNOLD GLADSTONE ..	38, Lightcliffe Road, Brighouse, Yorksh.
1050	Jan. 1884	SLADE, ISAAC	3, Claremont Road, West Kirby, Chesh.
4066	Oct. 1902	*SLATER, ARTHUR JAMES	1, Barden Place, Armley, Leeds.
4528	Oct. 1904	*SLATTER, ARTHUR WHITTARD ..	Nigeria Bitumen Co., Epe, Lagos.
4529	Oct. 1904	*SMALL, LEONARD JOHN	Woodford Urban District Council, Woodford Green, Essex.
4797	Oct. 1905	*SMALLBONE, HENRY JAMES ..	Streathley-on-Thames, Berkshire.
4067	Oct. 1902	*SMALLEY, WILLIAM	Falcon Court, 32, Fleet Street, E.C.
4063	Oct. 1902	*SMITH, ARTHUR KITSON	Messrs. Robins and Hine, 5, Waterloo Place, Pall Mall, S.W.
4070	Oct. 1902	*SMITH, CHARLES PHILIP	Town Hall, Greenwich, S.E.
4260	Oct. 1903	*SMITH, CUTHBERT	The Crossways, Totteridge, Herts.
3591	Oct. 1899	*SMITH, DOUGLAS	Orford Estate Office, Thwaite, Erpingham, Norfolk.
4798	Oct. 1905	*SMITH, EDMUND GEORGE	Valuer's Office, 57, Albion Place, Reading.
4530	Oct. 1904	*SMITH, ERNEST EDWARD	37, Shepherd's Lane, Dartford, Kent.
4262	Oct. 1903	*SMITH, FRANK HALL	Surveyor's Office, Sheringham, Norfolk.
5776	Oct. 1909	*SMITH, FRANKLIN	16, Upper Gloucester Place, Dorset Square, N.W.
5777	Oct. 1909	*SMITH, GEORGE	Chilvers Coton, Nuneaton, Warwickshire.
5428	Oct. 1898	*SMITH, GEORGE HENRY	1, Worcester Road, Wimbledon, S.W.
5275	Oct. 1907	*SMITH, GEORGE STUART ST. JOHN	Ivy House, High Street, Uckfield, Sussex.
6051	Oct. 1910	*SMITH, HAROLD EZRA	13, Dunstable Road, Luton, Beds.
4531	Oct. 1904	*SMITH, HAROLD ROBERT	The Cottage, Woodbridge, Suffolk.
5276	Oct. 1907	*SMITH, HAROLD SANKEY	"Lyewood," Boughton Monchelsea, Maidstone.
4263	Oct. 1903	*SMITH, HARRY VINCENT	5, Shaftesbury Avenue, New Barnet, Herts.
4799	Oct. 1905	*SMITH, HERBERT FREDERICK GEORGE	21, Portland Street, Southampton.
4382	Oct. 1901	*SMITH, HUBERT GEORGE	Boughton-Monchelsea, Maidstone.
4264	Oct. 1903	*SMITH, HUGH	Auction, Land and Estate Office, St. Peter's Road, Broadstairs, Kent.
2052	Mar. 1891	*SMITH, JAMES	Borough Surveyor's Office, Town Hall, Buckingham.
5033	Oct. 1906	*SMITH, JOHN EDWARD	Shipley Fields, Frizinghall, Bradford.
5277	Oct. 1907	*SMITH, JOHN HAROLD	49, Oakhurst Grove, East Dulwich, S.E.
1800	Oct. 1905	*SMITH, PERCIVAL	The Coffee Tavern, Needham Market, Suffolk.
4778	Oct. 1909	*SMITH, SIDNEY	54, Amwell Street, Rosebery Avenue, E.C., and 78, Great Queen Street, W.C.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1905	*SMITH, STEPHEN PERCY, B.A. (Oxon.) Dip. Ag. Camb.	Bishop's College School, Lennoxville, P.Q., Canada.
Oct. 1905	*||SMITH, WILLIAM BOULTON . . .	Council Offices, Hampton, Middlesex.
Oct. 1895	*SMITHELLS, EDWIN . . .	Merlewood, Newport Road, Stafford.
Nov. 1890	*SNAILUM, WALTER WADMAN . .	Church Street and Wingfield Road, Trowbridge, Wilts.
Oct. 1904	*||SNEATH, FRANK EDGAR . . .	Dacre House, 5, Arundel Street, Strand, W.C.
Oct. 1905	*SNODGRASS, REGINALD, A.M.I.C.E.	Tunsgate, Guildford.
Oct. 1909	*SNOOK, HOWARD VIRTUE . . .	10, Madeline Road, Petersfield, Hamp- shire.
Oct. 1897	*SNOW, HENRY CYPRIAN . . .	8, Pocklington's Walk, Leicester.
Oct. 1907	*SOANES, CHARLES FREEBOROUGH	Chinock, Glencairn Road, Streatham, S.W.
Oct. 1906	*SORRELL, HAROLD VALENTINE . .	Clarence Chambers, Clarence Street, Southend-on-Sea.
Oct. 1897	*SOUTHCORBE, JOHN CHARLES . .	Bridge Buildings, Barnstaple, Devon.
Oct. 1902	*||SPALDING, FRANK EWART . . .	
Feb. 1899	*SPEAKMAN, JOHN MCCLURE . . .	Quarantine Service, Tor, via Suez, Egypt.
Nov. 1890	*SPELMAN, WILLIAM WILTON RIX	Bank Plain, Norwich.
Feb. 1909	*SPENCER, AUBREY VERE . . .	Cuddington, Aylesbury, Bucks.
Oct. 1903	*SPENCER, FRANCIS AUGUSTUS	Architect's Department, London County Council, S.W.
Oct. 1908	*||SPOONER, HERBERT JOHN . . .	66, Gore Road, Victoria Park, N.E.
Oct. 1903	*||SPYER, GEORGE	Finchley Road Station, L. and N.W. Rly., Hampstead, N.W.
Oct. 1905	*||STACEY, MICHAEL BEDE . . .	Old Bank, Reigate, Surrey.
Oct. 1910	*||STAFFORD, JAMES NEILSON GREENLEES	206, Bristol Road, Edgbaston, Bir- mingham.
Oct. 1898	*STALLARD, HAROLD ORLANDO . .	Estate Office, Great Thurlow, Suffolk.
Oct. 1906	*STAMFORD, ALFRED ARTHUR . . .	32, Alric Avenue, North Malden, Surrey.
Oct. 1906	*||STAMPER, THOMAS HENRY GIL- BORN	Bookham, Surrey.
Oct. 1908	*STANIER, THOMAS MACPHERSON	Duchy of Cornwall Office, Liskeard, Cornwall.
Oct. 1910	*STANLEY, GERALD	Sunny Croft, Trowbridge, Wilts.
Oct. 1910	*STANLEY, OWEN GEOFFREY . . .	McDonald Lodge, Lightwater, Camberley, Surrey.
Oct. 1908	*STAPLETON, GEORGE AUBREY . . .	33, St. Julian's Farm Road, West Nor- wood, S.E.
Oct. 1900	*||STEAD, EDWARD JOHN, A.M.I.C.E.	County Surveyor's Office, Wells, Somerset.
Oct. 1910	*STEDEFORD, JOHN BRITTON . . .	7, Exbury Road, Catford, S.E.
Oct. 1910	*§STEDHAM, PERCY NORMAN . . .	91, West Street, Fareham, Hants.

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3897	Oct. 1901	*STEDMAN, CHARLES FREDERICK ..	Richmond House, Cranleigh, Surrey.
4535	Oct. 1904	*STEEDS, HERBERT EUSTACE ..	c/o R. E. Couchman, 35, Paradise Street, Birmingham.
6058	Oct. 1910	*STEEL, ALEXANDER MCKEAND ..	8 and 9, Newmarket Street, Hereford.
6059	Oct. 1910	*STEEL, CHARLES ERNEST ..	Pinecote, Gerrard's Cross, Bucks.
5780	Oct. 1909	*STEPHENSON, CHAMBRE CORCORANT .. STILLINGTON	Government Survey Department, Colombo, Ceylon.
5038	Oct. 1906	*STEPHENSON, JAMES KEPPEL ..	75 and 76, Lombard Street, E.C.
4536	Oct. 1904	*STEPHENSON, ROBERT BARNARD ..	Victoria Buildings, Grainger St. Newcastle-upon-Tyne.
5781	Oct. 1909	*STEVENS, BENJAMIN ..	Heathcote, Little Common Road, Bexhill-on-Sea, Sussex.
6060	Oct. 1910	*STEVENS, LEWIS JOHN ..	21, Campbell Road, Hanwell, W.
4806	Oct. 1905	*STEVENS, NICHOLAS RICHARD ..	1, Alexandra Villas, Finsbury Park, N.
5280	Oct. 1907	*STEVENS, WILLIAM FREDERICK HOOD ..	7, John Street, Adelphi, W.C.
6061	Oct. 1910	*STEVENSON, ALEXANDER EWING ..	Blawarthill, Yoker, by Glasgow.
710	Jan. 1882	STEVENSON, FREDERICK J. ..	Portland Office, Queen Anne Street, W.
6062	Oct. 1910	*STEWART, ERNEST ALEXANDER ..	Moondakotee Tea Estate, Sonada P. D. H. Railway, India.
4271	Oct. 1903	*STEWART, HARRY S. ...	Clarewood, Limpsfield, Surrey.
5281	Oct. 1907	*STILES, HERBERT ..	20, Temple Sheen Road, East Sheen, S.W.
4807	Oct. 1905	*STIMSON, DOUGLAS CECIL ..	52, Brixton Hill, S.W.
3630	Feb. 1900	*STIMSON, EDWARD FREDERICK ..	88, Strathbourne Road, Balham, S.W.
3270	Oct. 1897	*STIMSON, HERBERT PERCY ..	12, New Kent Road, S.E.
3737	Oct. 1900	*STOCKINGS, ARTHUR PERRY ..	Incahuara Dredging Company Ltd, Casella 112, La Paz, Bolivia.
3271	Oct. 1897	*STOKES, HUGH CHARLES ..	25, Avenue House, Henry Street, John's Wood, N.W.
3738	Oct., 1900	*STONE, CYRIL FRANK ..	Stenfur, Furze-field Crescent, Reigate, Surrey.
3899	Oct. 1901	*STONE, FREDERIC ..	Estate Office, Newmillerdam, Wakefield, Yorkshire.
5782	Oct. 1909	*STONE, HENRY WALCOTT ..	Lloyd Bank Chambers, North Street, Taunton, Somersetshire.
5282	Oct. 1907	*STONEHAM, FREDERIC MARTYN ..	32, Nicholas Lane, Lombard St., E.C. and 48, St. Thomas' Rd., Brentwood, Essex.
5783	Oct. 1909	*STOPHER, GEORGE ..	117 York Rd., King's Heath, Birmingham.
5283	Oct. 1907	*STOPS, HERBERT JACKSON ..	Towcester, Northamptonshire.
6063	Oct. 1910	*STOTT, HERBERT WHARTON ..	Bay Hall, Huddersfield, Yorkshire.
828	Dec. 1882	STOWER, JOSEPH ..	43, Chancery Lane, W.C.
6064	Oct. 1910	*STRACHAN, ROBERT GORDON ..	5, Great College Street, Westminster, S.W.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1909	*STRATHERN, TOM DALRYMPLE ..	Grimes Hill Estate Office, Middleton, Kirkby Lonsdale, Westmorland.
Oct. 1910	*STRATTON, PHILIP	Fernleigh, Merridale, Wolverhampton, Staffs.
Oct. 1907	*STRIDE, WALTER OSBORN	Messrs. Stride and Son, 63, East Street, Chichester.
Oct. 1910	*STROUD, ALBERT WILLIAM	51, Graemesdyke Avenue, East Sheen, S.W.
Oct. 1900	*STUDWICK, FRANK EDWARD	32, Park Road, Bromley, Kent.
Oct. 1903	*STUDWICK, PHILIP	32, Park Road, Bromley, Kent.
Oct. 1903	*STRUTT, JOHN JAMES	Whitelands, Witham, Essex.
Oct. 1896	*STUBBING, RICHARD WEBB	37, Queen Victoria Street, E.C.
Oct. 1910	*STUBINGTON, ROBERT ALAN	Slades, Bramley, Surrey.
Feb. 1889	*STUCKE, WILLIAM HENRY, A.R.I.B.A.	P.O. Box 2271, Johannesburg, and P.O. Box 91, Bloemfontein, B.S.A.
Dec. 1884	*STURGE, THEODORE	33, Corn Street, Bristol, Gloucestershire.
Jan. 1886	*STURGESS, JOHN MOORE	Penshurst Park, near Tonbridge, Kent, and 30, Craven Street, Strand, W.C.
Oct. 1905	*STURT, LESLIE	Highgate Station (G.N.R.), N.
Oct. 1909	*SUGDEN, ALBERT JOWETT	Architect's Department, County Hall, Wakefield.
Oct. 1907	*SUMMERFIELD, HORACE	1, Bury Street, Guildford.
Jan. 1891	*SUMMERFIELD, JOSEPH CHARLES	43, Chancery Lane, W.C.
Oct. 1906	*SUNDERLAND, AMOS	36, Edith Road, South Norwood, S.E.
Oct. 1901	*SURREY, CHRISTOPHER WILLIAM	134, Fleet Street, E.C.
Oct. 1909	*SUTCLIFFE, ALBERT JAMES	10, Victoria Street, Liverpool.
Feb. 1906	*SUTTON, CECIL N. STAFFORD	Estate Office, Brockenhurst, Hampshire.
Oct. 1909	*SWAIN, GEORGE HENRY	32, Priory Road, Wandsworth Road, S.W.
Oct. 1898	*SWAN, HARROLD	18, Wandle Rd., Upper Tooting, S.W.
Oct. 1897	*SWANWICK, BRUCE, M.A. (Oxon.)	The Thatched House, Coates, Cirencester, Gloucester.
Oct. 1910	*SWORDER, JOHN PERKINS	11, Benet Street, Cambridge.
Oct. 1908	*SYMES, EDWARD DOUGLAS	9, Calverley Park Gardens, Tunbridge Wells, Kent.
Oct. 1905	*SYMES, JAMES GORDON	Surveyor's Department, South Eastern Railway, 84, Tooley Street, London Bridge, E.C.
Oct. 1902	*SYMES, WILLIAM CHARLES	44, Rosebery Road, Muswell Hill, N.
Oct. 1910	*SYMS, REGINALD HARDY	Dalry, Kirkcudbright, N.B.
Oct. 1906	*SYMONS, GILBERT GEORGE	County Council Offices, Shire Hall, Chelmsford.

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5817	Nov. 1909	*TAIT, JOHN WILSON	Gresham Buildings, 71, George Street, Edinburgh.
4275	Oct. 1903	*TAIT, WILLIAM IRONSIDE	The Town Hall, Sudbury, Suffolk.
5286	Oct. 1907	*TALBOT-PONSONBY, ARTHUR HUGH BRABAZON	Langrish House, Petersfield, Hampshire.
3901	Oct. 1901	*TALLBOY, FREDERICK JAMES	4, Kensington Gardens, Cranbrook Park, Ilford, Essex.
5041	Oct. 1906	*TALLON, JOSEPH FRANCIS	1, Bold Square, Chester.
3902	Oct. 1901	*TANNER, RUDOLPH	
4540	Oct. 1904	*TATE, HENRY TINDALL	6, Arlington Avenue, Cottingham, Yorkshire.
4078	Oct. 1902	*TAYLER, VIVIAN ALFRED	New Labu Estate, Labu, Negri Sembilan, Federated Malay States.
5287	Oct. 1907	*TAYLOR, ALFRED CECIL	Ryecroft, Chinbrook Road, Groby Park, S.E.
5288	Oct. 1907	*TAYLOR, ALFRED MOULTON	Cotesbach, Lutterworth, Leicestershire.
6070	Oct. 1910	*TAYLOR, ARTHUR BRASSEY	"Ingestre," Sheen Road, Richmond, Surrey.
6071	Oct. 1910	*TAYLOR, DAVID HENRY	56, Ramsden Road, Balham, S.W.
5546	Oct. 1908	*TAYLOR, ERNEST	52, Roman Road, Colchester.
6072	Oct. 1910	*TAYLOR, FRANK GEOFFREY	399, Hagley Road, Edgbaston, Birmingham.
5788	Oct. 1909	*TAYLOR, FREDERICK HALE	23, Leinster Square, Bayswater, W.
5546	Oct. 1908	*TAYLOR, GEORGE ARTHUR	Frome Hill, Radstock, Bath.
5789	Oct. 1909	*TAYLOR, GEORGE D.	50, Upper English Street, Armagh.
5790	Oct. 1909	*TAYLOR, HAROLD TOM	3, Sheffield Place, Mumbles, Swansea.
4541	Oct. 1904	*TAYLOR, HERBERT WILLIAM	Surveyor's and Estate Office, Great Western Railway, Paddington Station, W.
3274	Oct. 1897	*TAYLOR, JOHN FRANCIS WHITE	3, Lincoln's Inn Fields, W.C.
5289	Oct. 1907	*TAYLOR, JOHN HENLEY	"Ingleside," Golden Manor, Hanwell, W.
3904	Oct. 1901	*TAYLOR, RUSSELL LEIGH	Newcastle Estate Office, Workington, Nottinghamshire.
4873	Feb. 1906	*TAYLOR, THOMAS OSBORNE	L.C.C., Spring Gardens, S.W.
6073	Oct. 1910	*TAYLOR, WALTER FLOYD	19, Church Road, Upper Norwood, W.
4811	Oct. 190	*TAYLOR, WILLIAM GRAHAM	Ingleside, Hanwell, W.
4812	Oct. 190	*TEARE, JOSEPH ERNEST	17, Farrant Street, Douglas, Isle of Man.
4813	Oct. 190	*TEASDALE, GEORGE WILLIAM	9, Persehouse Street, Walsall, Staffordshire.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1904	*TEMPLE, ALFRED	The Clarence Street Estate Office, Southend-on-Sea, Essex.
Oct. 1899	*TERRY, FRANCIS WILLIAM	40, Grosvenor Terrace, Bootham, York.
Oct. 1899	*TERRY, FRANK TREACHER	107, Victoria Street, S.W.
Oct. 1910	*THAKE, ROBERT FREDERICK WILLIAM	23, Talbot Road, West Ealing, W.
Feb. 1911	*THOBURN, HUGH FORSYTH	30, Station Road, Anerley, S.E.
Feb. 1906	THOMAS, ALFRED WILLIAM	Director of Works Department, Admiralty, S.W.
Oct. 1905	*THOMAS, ARTHUR JOHN	Eastfield, St. Thomas, Swansea.
Oct. 1903	*THOMAS, ERNEST JAMES	120, High Street, Gosport, Hampshire.
Oct. 1910	*THOMAS, FREDERICK CHARLES ..	"Tanita," Vale Road, Claygate, Surrey
Oct. 1905	*THOMAS, FREDERICK JAMES	35, Somerset Road, Newport, Mon.
Oct. 1909	*THOMAS, JAMES HUGH TREMAYNE	Tregays, Lostwithiel, Cornwall.
Oct. 1910	*THOMAS, JOHN HUMPHREY ENGLAND	6 and 7, St. John's Square, Cardiff.
Oct. 1902	*THOMAS, PERCIVAL HARTLAND ..	33, Corn Street, Bristol.
Oct. 1910	*THOMAS, ROBERT ROGERS	36, Bryn Road, Swansea.
Oct. 1906	*THOMERSON, ALBERT	100, Verdant Lane, Hither Green, S.E.
Oct. 1907	*THOMPSON, ALFRED ALEXANDER	Trym, Putney Heath Lane, Putney, S.W.
Oct. 1910	*THOMPSON, ARNOLD JOHN	15, Earlsfield Road, Wandsworth, S.W.
Oct. 1894	*THOMPSON, CLAUDE WILLIAM GEORGE HUGH	Estate Office, Escrick, York.
Oct. 1893	*THOMPSON, FREDERICK HUBERT	20, Kedleston Road, Derby.
Oct. 1907	*THOMPSON, FREDERICK WILLIAM	Birknigg, Ashford, Middlesex.
Oct. 1903	*THOMPSON, JOHN CLULOW	Knighton House, Leicester.
Oct. 1894	*THOMPSON, JOSEPH ATHERDEN ..	4, Lancaster Place, Strand, W.C.
Oct. 1908	*THOMPSON, NEWTON DUKINFIELD	Caterham Valley, Surrey.
Mar. 1895	*THOMPSON, ROLAND O'BRIEN ..	Messrs. J. Rider, Hunt and Co., Bridge House, 181, Queen Victoria Street, E.C.
Oct. 1906	*THOMPSON, THOMAS ERRINGTON	Estate Office, Jervaulx Abbey, Middleham, S.O., Yorks.
Oct. 1904	*THOMSON, HERBERT DAVID	5, Great James Street, Bedford Row, W.C.
Oct. 1909	*THORNE, HARMAN	The Square, Barnstaple, Devon.
Oct. 1910	*THORNLEY, HAROLD VICTOR	72, Streathbourne Road, Balham, S.W.
Oct. 1899	*THURGOOD, LEONARD FIELDER ..	8, Adelphi Terrace, Strand, W.C.
Oct. 1904	*THWAITES, ARTHUR MILBANK ..	Messrs. Cunningham and Gibaud, Lloyd's Bank Chambers, Bedford Street, Plymouth.
Oct. 1905	*THYNNE, REGINALD LAMBERT ..	9, Victoria Street, S.W.
Oct. 1910	*TICKLE, ARTHUR GEORGE WARNHAM	70A, Basinghall Street, E.C.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4083	Oct. 1902	*TIDEY, HERBERT GORDON ..	3, Pentonville Road, Islington, N.
5045	Oct. 1906	*TIDMARSH, CHARLES BAILLIE ..	Combs, Stowmarket, Suffolk.
3600	Oct. 1899	*TIGHE, ARTHUR	White Wick, Clacton-on-Sea, Essex.
4279	Oct. 1903	*TILLYARD, SIDNEY JOSEPH ..	51, London Street, Norwich.
3743	Oct. 1900	*TIMBRELL, ALAN	
3908	Oct. 1901	*TITTERTON, SYDNEY GEORGE PENN	Tram Terminus, Southchurch, Southend-on-Sea, Essex, and 40, Old Broad Street, E.C.
4817	Oct. 1905	*TIVENDALE, THOMAS	Highgate Station, G.N.R., N.
4548	Oct. 1904	*TOBIAS, MAURICE	Architect's Department, London County Council, 13, Charing Cross, S.W.
4549	Oct. 1904	*TODD, LESLIE EDWARD	Estate Office, Englefield, Reading.
4550	Oct. 1904	*TOLEY, ERNEST ALBERT	The Grove, Hanwell, W.
5046	Oct. 1906	*TOMKINS, SAMUEL EDWARD ..	68, Josephine Avenue, Brixton Hill, S.W.
3938	Feb. 1902	*TOMLIN, FRANCIS FERRIER ..	50, Station Road, Wood Green, N., and 164, Palmertson Road, Bowes Park, N.W.
4280	Oct. 1903	*TOMLIN, WILLIAM, JUN.	Hollydene, Birchington, Kent.
3136	Oct. 1896	*TOWN, HENRY ANNANDALE ..	Killingwork House, Forest Hall, Northumberland, and Station Chambers, Newcastle-on-Tyne.
5793	Oct. 1909	*TOWNLEY, HERBERT LIONEL ..	Lyndhurst, Empress Road, Derby.
3745	Oct. 1900	*TOWNLY, RONALD STARKEY ..	Maplethorpe, Canewdon Road, Waltham-on-Sea, Essex.
5293	Oct. 1907	*TOWNSEND, EDWARD ALDRIDGE	10, Sylvan Avenue, Bowes Park, N.W.
1979	Jan. 1891	*TOWNSEND, GEORGE JAMES ..	Architect's Department, London County Council, Spring Gardens, S.W.
5294	Oct. 1907	*TRAFFORD, FRANCIS NOEL	Birkenlaker, Upper Tooting Park, S.W.
5794	Oct. 1909	*TRAVERS, CHARLES ARTHUR ..	53, Orient Way, Rutherford, New Jersey, U.S.A.
5047	Oct. 1906	*TRESIDDER, HENRY EDMUND ..	7, Marlborough Road, Falmouth, Cornwall.
5795	Oct. 1909	*TROLLOPE, FRANCIS HENRY MOORE	13, Hobart Place, S.W.
6081	Oct. 1910	*TROLLOPE, ROBERT JOHN	14, Mount Street, W.
5295	Oct. 1907	*TROWBRIDGE, FRANK WILLIAM	8, Beaufort Gardens, St. John's, N.E.
5048	Oct. 1906	*TUCKER, ARTHUR HAINES	Capital and Counties Bank, Steyning, and 26, Chapel Road, Worthing, S.W.
4551	Oct. 1904	*TURNBULL, ROBERT ERNEST ..	Estate Office, Gallowhill, Morpeth, Northumberland.
5296	Oct. 1907	*TURNER, ALBURY CHARLES	52, Manor Court Road, Nuneaton, Warwickshire.
6082	Oct. 1910	*TURNER, ARTHUR	"Derncleugh," Grove Park, Waltham, N.E.
6083	Oct. 1910	*TURNER, AUGUSTUS GARDNER ..	Westbourne House, Richmond, and Twickenham, Middlesex.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1897	*TURNER, DRYSDALE	Royal Agricultural College, Cirencester, Gloucestershire.
Feb. 1906	*TURNER, EDGAR PASSAND	15, Canning Road, Croydon.
Oct. 1899	*TURNER, HENRY	17, Lark Avenue, Penwortham, near Preston, Lancashire.
Oct. 1905	*TURNER, HENRY CHARLES PETTIT	12, Landgrove Road, Wimbledon Park, S.W.
Oct. 1907	*TURNER, HAROLD ERNEST	118, Stamford Street, Ashton-under-Lyne, Lancs.
Oct. 1897	*TURNER, HERBERT	49, Deansgate, Manchester.
Oct. 1901	*TURNER, JABEZ TENNYSON ..	Works Department, H.M. Dockyard, Gibraltar.
Oct. 1909	*TURNER, JOSCELIN MAITLAND	c.o. T. R. Hulbert, Dumbleton, Evesham, Worcestershire.
May 1887	*TURNER, PERCY	Dale Hall, Henley Road, Ipswich.
Oct. 1900	*TURNER, VINCENT	Surveyor and Waterworks Engineer, Town Hall, Bilston, Staffs.
Oct. 1893	*TYLER, WILLIAM BOTT	Estate Department, L. and N. W. Ry., Euston Station, N.W.
Feb. 1906	*TYSER, GRAFTON LESLIE	71, Finchley Road, N.W.
Oct. 1910	*TYSON, GEORGE ALFRED	20 Crossley Street, Liverpool Road, N.
May 1884	UDNY, AUGUSTUS CHARLES	142, Springfield Road, Brighton.
Oct. 1907	*ULLYETT, LESLIE GEORGE STANTON	36, Poppleton Road, Leytonstone, N.E.
Oct. 1905	*UPTON, THOMAS HERBERT	Grays, Petworth, Sussex.
Oct. 1910	*VANSTONE, FREDERICK WILLIAM ELLIOTT	Torbay Park, Paignton, Devon.
Oct. 1904	*VARDY, CHARLES ALFRED SILVER	Cliveden Chambers, Maidenhead, Berkshire.
Oct. 1909	*VAUGHAN, ARTHUR HERBERT ..	Nchima, Cholo, via Chinde, Nyassaland.
Oct. 1897	*VEIT, LEONARD JAMES	7, Commercial Road, S.W.
Oct. 1906	*VENNING HARRY JOHN, A.R.I.B.A.	5, Bedford Row, W.C.
Nov. 1890	*VERITY, ERNEST GEORGE	7, Great Marlborough Street, W.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
4553	Oct. 1904	*VICKERMAN, MONTAGUE HAROLD	Ossulston, Copland Avenue, Wembley, Middlesex.
5548	Oct. 1908	*VIGARS, JOHN WILLIAM	c/o F. E. Vigars, Macquarrie Chambers, 12-14, Loftus Street, Sydney, N.S.
5798	Oct. 1909	*VIGERS, GEOFFREY LESLIE	4, Frederick's Place, Old Jewry, E.C.
3910	Oct. 1901	*VINCE, CLEMENT HARWOOD	Survey Department, Colombo, Ceylon.
5799	Oct. 1909	*VINCE, FREDERIC HAROLD	54, Cassio Road, Watford, Herts.
6086	Oct. 1910	*VINE, WILFRID GORDON	6, George Street, Euston Road, N.
4822	Oct. 1905	*Vining, ERIC LESLIE RANDALL	7, Laurence Pountney Hill, E.C.
4554	Oct. 1904	*VOISEY, PERCY DEERING	4, Princes Street South, St. Thomas, Exeter.
4555	Oct. 1904	*VOYCE, JOHN	6, King's Buildings, Chester.
1464	Feb. 1888	*WADE, HENRY	10, Pitt Street, Barnsley, Yorkshire.
6087	Oct. 1910	*WADE, REGINALD SIDNEY	Red House, Overhill Road, Lordship Lane, S.E.
5299	Oct. 1907	*WADMAN, ALBERT JOHN	Dakahla Estate, Ras-el-Khalig, Egypt.
5800	Oct. 1909	*WADSLEY, MICHAEL JAMES	88, Prospect Street, Hull.
5300	Oct. 1907	*WADSWORTH, JAMES MOFFATT	7, Crabtree Lane, Harpenden, Herts.
5549	Oct. 1908	*WAGSTAFF, FREDERICK HOWARD	16, Elmwood Road, Croydon.
5050	Oct. 1906	*WALFORD, EDWARD	Colenso Villa, Portland Road, Brighton, Grinstead, Sussex.
5051	Oct. 1906	*WALKDEN, WILLIAM	Chief Engineer's Office, Canadian Northern Railway, Winnipeg, Manitoba, Canada.
6088	Oct. 1910	*WALKER, CECIL EDWARD	33, Westgate, Peterborough.
6089	Oct. 1910	*WALKER, CYRIL HERBERT	Surveyor's Dept., Great Northern Railway, King's Cross, N.
5302	Oct. 1907	*WALKER, HENRY HAVELOCK	Richmond Chambers, Railway Road, Sheringham, Norfolk.
5801	Oct. 1909	*WALKER, JOHN WILLIS	Gwynfa, Creigiau, near Cardiff.
3024	Jan. 1896	*WALKER, WILLIAM SELVES	22, Moorgate Street, E.C.
4287	Oct. 1903	*WALL, IRVING	Thornroyd, Wakefield Road, Dalton, Huddersfield, Yorkshire.
6090	Oct. 1910	*WALL, JOHN ERNEST	Rosehurst, Bath Road, Worcester.
5550	Oct. 1908	*WALLACE, CHARLES ADAM	42, Empress Avenue, Ilford, Essex.
4288	Oct. 1903	*WALLACE, HERBERT ALEXANDER CRAIG	City Engineer's Department, Town of Bloemfontein, Orange River Colony.
4556	Oct. 1904	*WALLER, BERTRAM HANNEN	17, Above Bar, Southampton.
4823	Oct. 1905	*WALLER, HORACE	Valuation Offices, Inland Revenue, Midland Bank Buildings, Midland, Yorks.

P. O.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
02	Oct. 1909	*§ WALLER, WATHEN ARTHUR ..	The Old Vicarage, Bushey Heath, Herts.
03	Oct. 1909	*WALMESLEY-COTHAM, IVAN ..	17, Aughton Road, Birkdale, South port, Lancs.
57	Oct. 1904	*¶ WALSH, FREDERICK WILLIAM ..	49, Oxford Road, Kilburn, N.W.
39	Oct. 1903	*¶ WALTER, SYDNEY JAMES ..	Ecclesbourne, New Wanstead, Essex.
52	Oct. 1906	*¶ WALTERS, WILLIAM DAVID ..	22, Berw Rd., Llwynypia, Glamorganshire.
81	Oct. 1897	*WALTON, EDGAR THOMAS..	Tronoh, Perak, Federated Malay States.
01	Oct. 1910	*WAPSHOTT, FRANCIS ELLISS ..	Queen Street Chambers, Maidenhead, Berk.
85	Oct. 1902	*WARD, EDWARD JOHN ..	St. Aubyn Street, Devonport.
03	Oct. 1907	*¶ WARD, JOHN ELDON ..	10, Wyresdale Road, Bolton, Lancs.
53	Oct. 1906	*¶ WARD, REGINALD CHARLES ..	23, Princes Street, Ipswich.
39	Oct. 1898	*WARING, HOLT ..	Waringstown, Co. Down, Ireland.
92	Oct. 1910	*WARNER, BLAIR MARTIN ..	Harfields, Fareham, Hants.
04	Oct. 1909	*¶ WARTNABY, CHARLES RICHARD ARNOLD	Clipston, Market Harborough, Leicestershire.
52	Oct. 1900	*WATERS, FRANK..	15, Bank Plain, Norwich.
24	Oct. 1905	*WATKINS, HAROLD ALFRED ..	188, Kew Road, Richmond, Surrey.
93	Oct. 1910	*WATSON, ALBERT RICHARD ..	12, Lombard Street, Lichfield, Staffs.
94	Oct. 1910	*WATSON, CHARLES HAVERS ..	22, Walbrook, E.C.
54	Oct. 1906	*WATSON, NOEL BRADY ..	Westover, Low Fell, Co. Durham.
14	Oct. 1893	*WATSON, WILLIAM JAMES..	13, Pembroke Square, Kensington, W.
12	Oct. 1901	*¶ WATT, ALEXANDER LINDSAY ..	Derwentwater Estate Office, Keswick, Cumberland.
91	Oct. 1903	*¶ WATTS, ERNEST WILLIAM..	Castledine House, Anerley Park, S.E.
92	Oct. 1903	*¶ WATTS, FREDERICK SPRING ..	38, Sloane Street, S.W.
04	Oct. 1907	*¶ WATTS, GRAHAM REGINALD GARNER ..	South Kensington Station, S.W.
87	Oct. 1902	*WAUGH, REGINALD ROBERT ..	c/o British Bank of South America, Bartolomé Mitre 400, Buenos Aires, S. America.
05	Oct. 1907	*¶ WAY, LIONEL HUGH ..	Valuer's Office, 28, High West Street, Dorchester.
30	Oct. 1904	*¶ WAYMOUTH, JOHN KENNERLEY ..	Clarence Street Estate Office, Southend- on-Sea, Essex.
38	Oct. 1896	*WEAVER, HENRY PERCIVAL ..	Lye, Stourbridge, Worcestershire.
05	Oct. 1909	*WEAVER, LIONEL HUNTER ..	30, Lytton Grove, Putney Hill, S.W.
10	Dec. 1888	*WEBB, FREDERIC NOEL ..	Babraham, Cambridge.
05	Oct. 1910	*WEBB, ROBERT DUNCAN ..	Valuer's Department, 18, Bennett's Hill, Birmingham.
1	Oct. 1904	*WEBBER, ARTHUR DANIEL MOU- TRAY ..	Mitchelstown Castle, Co. Cork.

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6096	Oct. 1910	*WEBSTER, FREDERICK ANNESLEY MICHAEL	45, Queen's Road, Wimbledon, S.W.
5551	Oct. 1908	*WEDDELL, ROBERT HOUSTON . .	Park Villa, Uddingston, Lanarkshire.
3441	Oct. 1898	*WEEKES, CYRIL SWAFFER	Estate Offices, Guildford.
5056	Oct. 1906	*WEEKS, PERCY BERTRAM	Vale Towers, Tunbridge Wells.
5506	Oct. 1907	*§WEETMAN, WILLIAM CHARLES CUMMING	548, Ecclesall Road, Sheffield.
5552	Oct. 1908	*¶WEGUELIN, JOHN DAVID REECE	Streathbourne, Smallfields, Horley, Surrey.
3316	Feb. 1898	*WEIR, JAMES SCOTT, A.M.I.C.E.	Town Hall, Jarrow, Co. Durham.
5307	Oct. 1907	*¶WELLINGS, CHARLES HENRY CLIFFORD	53, Leigham Court Road, Streatham S.W.
5806	Oct. 1909	*WELSH, MARTIN FREDERICK . .	1, Salisbury Gardens, Jesmond, Newcastle-on-Tyne.
3913	Oct. 1901	*¶WEST, ARTHUR SMITH	7, Haywra Crescent, Harrogate, Yorkshire.
4563	Oct. 1904	*WEST, HAROLD	Public Works Department, Hong Kong.
3754	Oct. 1900	*WEST, SIDNEY HERBERT	North House, Portslade, Sussex.
5057	Oct. 1906	*¶WESTBROOK, BERNARD ANSON . .	54, Dudley Road, Tunbridge Wells.
4293	Oct. 1903	*¶WESTBROOK, CHARLES EDWARD	Bank Buildings, Tunbridge Wells.
941	Apr. 1883	WESTON, JOSEPH AURELIUS . . .	83, High Street, Bedford.
3755	Oct. 1900	*WETENHALL, EDWARD BOX, A.R.I.B.A.	North Saanich, British Columbia, Canada.
5553	Oct. 1908	*¶WHEELER, HERBERT HENRY . .	Valuer's Department, County Buildings, College Court, Gloucester.
6097	Oct. 1910	*WHEELER, LEONARD CHARLES . .	Cwm Dale, Cobham, Surrey.
4825	Oct. 1905	*WHEELER, PERCY HARRISKINE	"Easebourne," Midhurst, Sussex.
4590	Feb. 1905	*¶WHEELER, WELBY	26, St. Charles Square, North Kensington, W.
6098	Oct. 1910	*WHESKER, JOHN EDWARD	36, Sussex Street, Winchester.
4564	Oct. 1904	*¶WHIDDINGTON, STANLEY DUNFORD	63, Berners Street, Oxford Street, London.
6099	Oct. 1910	*¶WHINNERAH, WILLIAM	Polefield Hall, Prestwich, Lancs.
6119	Feb. 1911	*WHITAKER, GEORGE	Engineer's Department, Fylde Water Board, Sefton Street, Blackpool, Lancashire.
4039	Oct. 1902	*¶WHITAKER, HUGH	Valuation Department, King's Lynn, Norfolk.
4876	Feb. 1906	*¶WHITE, ALFRED LLEWELLYN . .	Elmthorpe, Lordship Road, N.
4090	Oct. 1902	*WHITE, ARTHUR VIVIAN	The Poplars, North End, Portsmouth, Hampshire.
5555	Oct. 1908	*WHITE, HERBERT PRATT	4, Calverley Terrace, Tunbridge Wells, Kent.
4326	Oct. 1905	*WHITE, JOHN WILLIAM EDDEN	High Street, Edenbridge, Kent.
4565	Oct. 1904	*WHITE, RICHARD STANLEY . . .	Cambridge House, Cambridge, n. Stonehouse, Gloucestershire.

P. O.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
8	Oct. 1907	*WHITE, WILLIAM HENRY PERCY	8, St. Leonard's Road, Surbiton, Surrey.
5	Jan. 1896	*WHITE, WILLIAM, JUN. . . .	33, Pilgrim Street, Newcastle-upon-Tyne.
4	Oct. 1901	*WHITEHEAD, ERNEST MORTIMER	Messrs. E. Mortimer and Company, 48, Dover Street, W.
2	Oct. 1899	*WHITELEY, CYPRIAN CHARLES OSWALD	82, Queen Street, E.C.
2	Feb. 1908	*WHITLOCK, FRANCIS JOHN . . .	The Mart, Bank Street, Rugby.
6	Oct. 1904	*WHITTINGHAM, LEWIS STUART .	Estate Office, Millichope Park, Craven Arms, Shropshire.
1	Oct. 1902	*WHITTINGTON-COOPER, ALFRED	Messrs. Charlton and Co., Estate Offices, Railway Bridge, Wimbledon, S.W.
2	Oct. 1902	*WHITTON, HAROLD WILLIAM . .	County Chambers. The Drapery, Northampton.
9	Oct. 1907	*WHYTE, THOMAS	118, Mains Street, Glasgow.
7	Oct. 1905	*WICKENDEN, ARTHUR FRED . . .	175, Balfour Road, Ilford, Essex.
8	Oct. 1905	*WICKENDEN, ERNEST	15, Moscow Road, Clive Vale, Hastings.
0	Oct. 1910	*WICKER, JOHN OWEN	2, Westeroft Road, Carshalton, Surrey
0	Oct. 1907	*WIDDOWSON, GEORGE CLIFFORD	14, Rosemont Road, Richmond Hill, Surrey.
6	Oct. 1908	*WIGHTMAN, AUGUSTUS FRED- ERICK	89, Sutton Road, Walsall, Staffs.
9	Oct. 1905	*WIGHTMAN, WILLIAM OSBORNE	Lynton, Dornton Road, South Croydon, Surrey.
7	Feb. 1897	*WIGRAM, HENRY JOSEPH	The Lodge, South Collingham, Newark, Nottinghamshire.
6	Jan. 1896	*WILDE, SIDNEY ALGERNON . . .	14, 16, and 18, Bloomsbury Street, New Oxford Street, W.C.
5	Oct. 1903	*WILKES, JOHN FISKE, B.A. (Cantab.)	Elmdon Bury, Saffron Walden, Essex.
7	Oct. 1909	*WILKES, GEORGE THOMAS	Brooklyn Lodge, Barnes Common, S.W.
4	Oct. 1902	*WILKS, CLEMENT	20, Regent Street, Waterloo Place, S.W.
6	May 1891	*WILKS, ERNEST STRINGER . . .	Douglas Avenue, Hythe, Kent.
0	Oct. 1905	*WILLIAMS, CHARLES	Valuation Department, Inland Revenue, Coventry.
5	Oct. 1897	*WILLIAMS, DANIEL SMITH	47, Queen Street, Cardiff.
1	Oct. 1907	*WILLIAMS, DAVID	44, Elm Grove Road, Salisbury.
3	Oct. 1906	*WILLIAMS, ERNEST	Eagle House, Brislington, Bristol.
7	Oct. 1908	*WILLIAMS, FRANK McCLURE . . .	Merton, Watton, Norfolk.
5	Oct. 1902	*WILLIAMS, FRANK WARREN . . .	Magnolia, Ennismore Avenue, Guildford.
3	Oct. 1904	*WILLIAMS, JOSEPH BERTRAM . .	54, Church Street, St. Helen's, Lancashire.
4	Oct. 1898	*WILLIAMS, PETER LLOYD ARM- STRONG	22, West Side, Clapham Common, S.W.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
5558	Oct. 1908	*WILLIAMS, WILLIAM ALFRED ..	16, Old Bond Street, Bath.
5312	Oct. 1907	*WILLIAMS, WILLIAM HENRY ..	Oficina del Ingeniero, F. C. B. A. I. 25 de Mayo 277, Buenos Aires, America.
442	Apr. 1876	WILLIAMS, WILLIAM WELSBY ..	Farnham, Surrey.
5559	Oct. 1908	*WILLIAMS, WORTHINGTON ERIC	44, Richmond Street, Ashton-under Lyne, Lancashire.
5313	Oct. 1907	*WILLMOTT, ARTHUR STANLEY ..	Lexden, Sutherland Road, Ealing, W.
4831	Oct. 1905	*WILLMOTT, JAMES PERCEVAL ..	Lexden, Sutherland Road, Ealing, W.
3140	Oct. 1896	*WILLOUGHBY, CHARLES ALBERT	22, Chancery Lane, W.C.
1083	Jan. 1884	WILLOUGHBY, CHARLES WILLIAM	22, Chancery Lane, W.C.
4096	Oct. 1902	*WILLOUGHBY, FRANK	Estate Office, Merstham, Surrey.
3918	Oct. 1901	*WILSON, EVERARD JOHN	Messrs. Tuckett and Son, 2, Basing Street, E.C.
4569	Oct. 1904	*WILSON, GEORGE LEOPOLD ..	Messrs. Palmer and Turner, H Kong.
2472	Nov. 1891	*WILSON, JAMES CALVERT	Newcastle Estate Office, The Pa Nottingham.
2555	Nov. 1892	*WILSON, JOHN HAYES	10, Upstall Street, Camberwell, S
5808	Oct. 1903	*WILSON, MALCOLM MILLAR ..	47, High Street, Bedford.
5059	Oct. 1906	*WINDER, FRANCIS ARNOLD ..	Corn Exchange Chambers, Sheffi
5060	Oct. 1906	*WINDER, GEORGE MAURICE ..	Fairmile, Ottery St. Mary, Devon.
5363	Feb. 1908	*WINTLE, ARTHUR	Kingsdown, Strawberry Hill Ro Twickenham, Middlesex.
5560	Oct. 1908	*WINTON, DOUGLAS GEORGE ..	Etherton Hill, Speldhurst, Tunbr Wells.
5561	Oct. 1908	*WISE, FREDERICK JOHN	Valuation Department, Inland Reve King's Lynn, Norfolk.
5562	Oct. 1908	*WISE, WILLIAM CHARLES	Gerrard's Cross, Bucks.
3611	Oct. 1899	*WITHAM, JAMES BERNARD ..	Thurleigh, Priory Road, Sale, Ches
3919	Oct. 1901	*WONNACOTT, HOWARD JOHN ..	130, Oglander Road, East Dulw S.E.
5809	Oct. 1909	*WONNACOTT, JAMES PALMER ..	Tollards, Countess Weir, near Ex
5563	Oct. 1908	*WOOD, ALBERT FREDERICK ..	Eldon House, Leyland Road, Lee,
4670	Oct. 1904	*WOOD, HAROLD	4, South St. Mary's Gate, Grin Lincolnshire.
3920	Oct. 1901	*WOOD, HERBERT CALVERT ..	Chesters Estate Office, Humshaug Tyne, S.O., Northumberland.
4832	Oct. 1905	*WOOD, HUGH REGINALD	6, Ely Place, Dublin.
6101	Oct. 1910	*WOOD, LEONARD	4, South St. Mary's Gate, Grin Lines.
3921	Oct. 1901	*WOOD, ROWLAND HARRY	
3613	Oct. 1899	*WOODCOCK, FRANK SYDNEY ..	Post Office, Saskatoon, Saskatche Canada.
6102	Oct. 1910	*WOODCOCK, RICHARD STANLEY	Haven House, Thorpe, near Le Suffolk.

Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
Oct. 1904	*¶ WOODHAMS, JAMES PERCY ..	51, Priory Avenue, Hastings.
Oct. 1907	*¶ WOODHEAD, HAROLD HAYDN ..	16, Peterson Rd., Wakefield, Yorkshire.
Oct. 1905	*¶ WOODWARD, HENRY GORDON ..	The Oaks, Bacton, Stowmarket, Suffolk.
Oct. 1910	* WOOLDRIDGE, ARTHUR MAIN- WARING	49, Goldington Avenue, Bedford.
Oct. 1909	*¶ WOOLLEY, MAURICE THEODORE	Rectory Place, Loughborough.
Oct. 1909	*¶ WOOLLEY, REGINALD GEORGE ..	The Hill, Sheringham, Norfolk.
Oct. 1909	*¶ WOOLLEY, RICHARD MELSOME ..	Salisbury.
Jan. 1887	* WOOLNOUGH, JOHN WILLIAM ..	6, Vicarage Drive, Eastbourne, Sussex.
Feb. 1897	* WOOLNOUGH, TOM	Fleet House, Hoppers Road, Winchmore, Middlesex.
Oct. 1896	* WORDSWORTH, CHRISTOPHER ..	Brooklands, South Godstone, Surrey.
Feb. 1909	*¶ WORLAND, HENRY JOHN	"Rushton," Robinhood Road, Brent- wood, Essex.
Oct. 1905	* WORLEY, FREDERICK HORACE ..	Parr's Bark Buildings, George Lane, Woodford, Essex.
Oct. 1907	*¶ WORMLEIGHTON, BERNARD JOSEPH	Council Offices, Goole, Yorkshire.
Oct. 1904	* WORRALL, BERTRAM	Rectory Farm House, Steeple Aston, Oxford.
Feb. 1911	*¶ WORTH, GEORGE PEARCE	The Homestead, Windmill Road, Ealing, W.
Dec. 1887	* WORTHINGTON, JAMES SCOTT ..	5, Lichfield Gardens, Richmond, Surrey.
Oct. 1906	*¶ § WRAIGHT, GEORGE FREDERICK HAROLD	Upton Lodge, Squires Lane, Finchley, N.
Oct. 1909	*¶ WRIGHT, CHARLES ERNEST ..	Glan Aber Park, Hough Green, Chester.
Oct. 1903	*¶ WRIGHT, CHARLES LEE	Inland Revenue, Shannon Court, Bristol.
Oct. 1897	* WRIGHT, ERNEST BERESFORD FITZHERBERT	Yeldersley Hall, Derby.
Oct. 1904	*¶ WRIGHT, ERNEST HARRY	6, Thomas Street, Woolwich, Kent.
Oct. 1894	* WRIGHT, PHILIP CHETWOOD ..	Brattleby Hall, near Lincoln.
Oct. 1910	* WRIGHT, REGINALD LESLIE ..	33, New Street, Henley-on-Thames, Oxfordshire.
Oct. 1909	* WRIGHT, THOMAS HENRY GORDON	Bank Plain, Norwich.
Oct. 1907	*¶ WRIGHT, WILLIAM NEWCOME ..	c/o G. Billings, 85 London Wall, E.C.
Oct. 1905	*¶ § WYKES, HERBERT IVIE	Surveyor's Department, G.N.R., King's Cross, N.
Oct. 1901	* WYLEY, HENRY CHARLES	Newmarket Buildings, Bridgnorth, Salop.

Dip. No.	Date of Election.	PROFESSIONAL ASSOCIATES.	Address.
5318	Oct. 1907	*YATES, HUBERT	13, Dartmouth Street, Westminster S.W.
5319	Oct. 1907	*YELF, JACK ROBERT	Gharbieh Land Company, Ras Khalig, Egypt.
3616	Oct. 1899	*YEW DALL, FRANCIS EDWARD	28, Defoe Avenue, Kew Gardens, Surrey.
6105	Oct. 1910	*YORK, WILLIAM HENRY	"Clarendon," Station Road, New Barnet, Herts.
5065	Oct. 1906	*YORKE, MAURICE FRANCIS	Estate Office, Sudbury, Derby.
4099	Oct. 1902	*YOUATT, ERNEST	7, Imperial Buildings, P.O. Box 35, Bulawayo.
5066	Oct. 1906	*YOUNG, ARCHIBALD FORD	51, Coleman Street, E.C.
4575	Oct. 1904	*YOUNG, CHARLES EDWARD	Stoneygate, Park Avenue, Ilford, Essex.
5834	Feb. 1910	*YOUNG, DAVID FERNÉE	2, The Broadway, Barking, Essex.
5816	Oct. 1909	*YOUNG, GORDON CASSON	17, Southampton Street, Bloomsbury, W.C.
4836	Oct. 1905	*YOUNG, HERBERT HENRY	11, Tankerville Road, Streatham, S.W.
5320	Oct. 1907	*YOUNG, JAMES WEIR	198, West George Street, Glasgow.
3761	Oct. 1900	*YOUNG, KENNETH JAMES	Moree, Coombe Road, South Croydon, Surrey.
4837	Oct. 1905	*YOUNG, SIDNEY	Redholme, The Wallands, Lewes.
5067	Oct. 1906	*YOUNG, THOMAS, N.D.A.	Woodbine Villa, Cupar, Fife.
2999	Oct. 1895	*YOUNG, WILLIAM	4, St. Peter's Street, St. Albans, Hertfordshire.
5068	Oct. 1906	*YOUNG, WILLIAM ROSS	Burgh Surveyor, North Berwick.

Total number of Professional Associates, 2052.

Associates.

Date of election.	ASSOCIATES.	Address.
Oct. 1905 Nov. 1876	ALLAN, CHARLES EDWARD .. ALVERSTONE, THE RIGHT HON- OURABLE LORD, G.C.M.G., LORD CHIEF JUSTICE OF ENGLAND (Associate of Council).	12, King's Bench Walk, Temple, E.C. Hornton Lodge, Pitt Street, Kensing- ton, W.
May 1888	BARNES, GEORGE FREDERICK ..	London County Council, Spring Gardens, S.W.
Oct. 1899	BARRY, CHARLES EDWARD ..	Parliament Mansions, Victoria Street, Westminster, S.W.
July 1868	BARRY, SIR JOHN WOLFE, K.C.B., M.I.C.E. (Associate of Council)	Dartmouth House, 2, Queen Anne's Gate, S.W.
Feb. 1879	BEALE, JAMES SAMUEL	16, Great George Street, S.W.
Oct. 1910	BEALE, JOHN FIELD	16, Great George Street, S.W.
Oct. 1906	BEALE, SYDNEY WILLIAM PHIPSON	3, Harcourt Buildings, Temple, E.C.
Feb. 1892	BELLEWES, GEORGE OLIVER ..	45, Parliament Street, S.W.
Oct. 1900	BERKELEY, ROWLAND THOMAS MORTIMER, B.A. (Cantab.) ..	18, Abingdon Street, Westminster, S.W.
Oct. 1907	BIDDER, HAROLD FRANCIS, B.A.	9, Bridge Street, Westminster, S.W.
Feb. 1899	BLACKSHAW, JOHN FRANK ..	The Cottage, Bromsgrove, Worcester.
Jan. 1890	BOULGER, GEORGE EDWARD SIMONDS	11, Onslow Road, Richmond, Surrey.
Feb. 1884	BUND, JOHN W. WILLIS	15, Old Square, Lincoln's Inn, W.C.
Feb. 1909	CANTELL, MARK TAYLOR	Municipal Technical College, Brighton.
Feb. 1908	CARDALE, WILLIAM HENRY ..	24, Esplanade Road, Bombay.
Feb. 1871	CASTLE, EDWARD JAMES, K.C. ..	89, Harcourt Terrace, South Kensington, S.W.
Jan. 1891	CLARKE, SIR ERNEST	c/o Harry C. Wallace, 1, Cloisters, Tem- ple, E.C., and 31, Tavistock Square, W.C.

Date of Election.	ASSOCIATES.	Address.
Dec. 1883	CLODE, WALTER	3, Harcourt Buildings, Temple, E.C.
Oct. 1894	COLAM, ROBERT FREDERICK ..	4, Essex Court, Temple, E.C.
Feb. 1900	COURTHOPE-MUNROE, HARRY, M.A. (<i>Cantab.</i>)	3, Harcourt Buildings, Temple, E.C.
Jan. 1896	COWARD, JOHN CHARLES LEWIS, K.C.	3, Pump Court, Temple, E.C.
Jan. 1885	CRIPPS, SIR ALFRED CHARLES, K.C.V.O., K.C., M.P.	1, Essex Court, Temple, E.C.
Feb. 1900	DANCKWERTS, WILLIAM OTTO ADOLPH JULIUS, K.C.	7, New Court, Carey Street, W.C.
Feb. 1910	DIBDIN, LEWIS GEORGE	9, King's Bench Walk, Temple, E.C.
Oct. 1898	DOWNIE, ALEX. FRANCIS MAC- KENZIE	Alton, Hants.
Feb. 1907	FLETCHER-MOULTON, HUGH LAURENCE	11, King's Bench Walk, Temple, E.C.
Feb. 1878	FREEMAN, GEO. MALLOWS, K.C. ..	Palace Chambers, 9, Bridge Street, S.W., and 11, King's Bench Walk, Temple, E.C.
Mar. 1878	FRESHFIELD, EDWIN	5, Bank Buildings, E.C.
Feb. 1890	GAYTON, CHARLES	Much Hadham, near Ware, Herts.
Feb. 1899	GRAHAM, WILLIAM VAUX, M.I.C.E.	5, Queen Anne's Gate, S.W.
Jan. 1874	GRANTHAM, RICHARD FUGE, M.I.C.E.	5, Little College Street, Westminster Abbey, S.W.
Oct. 1907	GRANTHAM, WILLIAM WILSON ..	6, Crown Office Row, Temple, E.C.
Feb. 1909	GREGORY, HENRY HOLMAN, K.C. ..	2, Mitre Court Buildings, Temple, E.C.
Feb. 1909	GWYER, MAURICE LENFORD ..	2, Harcourt Buildings, Temple, E.C.
Oct. 1906	HARPER, RICHARD WILLIAMSON	5, King's Bench Walk, Temple, E.C.
Oct. 1897	HILL, JOHN SMITH, B.A., B.Sc. (<i>Lond.</i>)	The Agricultural College, Aspatria Cumberland.
Feb. 1907	HOUGHTON, GEORGE BOYDELL ..	1, Temple Gardens, E.C.
Oct. 1909	†HOWES, ARTHUR BURNABY ..	6, Middle Temple Lane, E.C.
Jan. 1887	HUDSON, ALFRED ARTHUR, K.C. ..	5, Paper Buildings, Temple, E.C.

Date of Election.	ASSOCIATES.	Address.
Oct. 1904	HUTCHINSON, CHRISTOPHER CLARKE, K.C.	3, Harcourt Buildings, Temple, E.C., and Palace Chambers, 9, Bridge Street, S.W.
Feb. 1905	JEEVES, WILLIAM JOHN	Palace Chambers, 9, Bridge Street, Westminster, S.W.
May 1887	KINCH, EDWARD.. .. .	Royal Agricultural College, Cirencester.
Apr. 1873	KING, WILLIAM, M.I.C.E.	5, Beach Lawn, Waterloo, Liverpool.
Nov. 1891	LEWORTHY, JOHN HENRY.. ..	29, Fleet Street, E.C.
Oct. 1905	MACKENZIE, KENNETH JAMES JOSEPH	Department of Agriculture, Cambridge.
May 1891	MALDEN, WALTER JAMES	Etchingham, Sussex,
Nov. 1891	MENCE, PHILLIP ALLAN	Banstead House, Fontenoy Road, Balham, S.W.
Oct. 1895	MILLES, CHARLES WILLIAM ..	Tregenna, The Beacon, Exmouth, Devonshire.
Oct. 1906	MOON, ERNEST ROBERT, K.C. ..	2, Temple Gardens, E.C.
Feb. 1906	MOULD, GRAHAM HARLEY.. ..	3, Plowden Buildings, Temple, E.C.
Feb. 1905	PAGE, ERNEST, K.C.	78, Queen's Gate, S.W.
Oct. 1895	PAIN, ARTHUR CADLICK, M.I.C.E.	17, Victoria Street, S.W.
Feb. 1894	PINCHES, EDWARD EWIN	2, Essex Court, Temple, E.C., and 1, Nevern Road, South Kensington, S.W.
Oct. 1894	REDMAN, JOSEPH HAWORTH ..	2, New Court, Lincoln's Inn, W.C.
Jan. 1885	RICKARDS, ARTHUR GEORGE, K.C., M.A. (<i>Oxon.</i>)	Palace Chambers, 9, Bridge Street, S.W., and 11, King's Bench Walk, Temple, E.C.
Jan. 1882	RIGG, HERBERT ADDINGTON, K.C.	41, Parliament Street, S.W.
Oct. 1895	RUSSELL, CHARLES ALFRED, K.C.	2, Harcourt Buildings, Temple, E.C.

Date of Election.	ASSOCIATES.	Address.
Dec. 1884	SCOTT, THE HON. HENRY ROBERT	Belvoir Castle, Grantham, Lincolnshire.
Feb. 1889	SETH-SMITH, ARCHIBALD	Silvermere, Cobham, Surrey.
Jan. 1896	SOMERVILLE, WILLIAM, M.A., D.SC.	121, Banbury Road, Oxford.
Jan. 1884	STATHAM, WILLIAM ARNOLD . .	12, King's Bench Walk, Temple, E.C., and 23, Abingdon Street, S.W.
Jan. 1882	STEPHENS, PEMBROKE S., K.C. . .	Palace Chambers, 9, Bridge Street, Westminster, S.W.
Jan. 1896	STUTFIELD, ALFRED ROBERT OGILVIE	The Bedford Estate Office, Bloomsbury, W.C.
Feb. 1899	TERRY, GEORGE PERCY WARNER	33, Dalmore Road, West Dulwich, S.E.
Feb. 1909	THORNE, RICHARD SQUIRE, B.A. (<i>Cantab.</i>)	Nicoll Farm, Edgware, Middlesex, and Inner Temple, E.C.
Oct. 1899	VAUGHAN, EDWARD JOSEPH . .	Focklesbrook, Chobham, Surrey.
Oct. 1902	WALLACE, ROBERT	Edinburgh University.
Oct. 1907	WALSH, CECIL HENRY	4, Temple Gardens, E.C.
May 1885	WARREN, REGINALD AUGUSTUS	Preston Place, Worthing, Sussex.
Feb. 1905	WILLIAMS, WILLIAM LYMINGTON	Portley, Caterham, Surrey.
Feb. 1909	YOUNG, JAMES DAWBARN	1, Garden Court, Temple, E.C.

Total number of Associates, 72.

Colonial Fellows.

Date of Election.	COLONIAL FELLOWS.	Address.
Oct. 1907	ABRAHAMS, CHARLES VICTOR	City Surveyor's Office, Kingston, Jamaica, B.W.I.
Feb. 1902	ALLEN, RAYMOND CECIL ..	Chief Surveyor, Uganda Protectorate, British East Africa, via Mombasa.
A. Oct. 1901 C.F. April 1905	*ANDERSON, HENRY, A.M.I.C.E.	Messrs. H. S. King and Co., 65, Cornhill, E.C.
Oct. 1899	BAKER, WILLIAM ANTHONY..	Surveyor-General's Office, Kingston, Jamaica, B.W.I.
Oct. 1904	BANCROFT, AUGUSTUS CHARLES	Stokes Hall, Plantain Garden River P.O., Jamaica.
A. Oct. 1895 C.F. April 1911	*BELL-JOHN, HARRY	District Engineer, Public Works Department, Pretoria, Transvaal.
Oct. 1893	BOWEN, ERNEST FRANCIS SINDERBY	Superintendent of Public Works, Barbadoes, West Indies.
F. Jan. 1891 C.F. Dec. 1910	BURCHELL, SIDNEY HERBERT	Santa Barbara, California, U.S.A.
A. Oct. 1905 C.F. Oct. 1910	*BURSTAL, ARTHUR CYRIL ..	Bengal-Nagpur Railway Company, Chahardharpur, India.
A. Oct. 1897 F. Oct. 1898 C.F. Feb. 1906	*CARPMAEL, HAROLD	c/o Dr. Carpmael, 125, Half Moon Lane, Herne Hill, S.E.
Oct. 1902	CARTWRIGHT, FRANK	21, Parsons Lane, Bury, Lancashire.
A. Oct. 1901 F. Sep. 1903 C.F. Oct. 1907	*CHATELL, ARTHUR PAUL ..	640, Twelfth Street, Jasper Avenue, Edmonton, Alberta, Canada.
Feb. 1906	CHYE, TIAN FOOK.. ..	Traffic Manager, Yueh-Han Railway of Three Provinces, Shek Wai Tong, Canton, S. China.
A. Oct. 1897 C.F. Oct. 1910	*CLARKE, CHARLES WENTWORTH	Dominion Land Surveyor, Regina, Sask., Canada.
Oct. 1908	COGHLAN, HENRY LAKE ..	5, Raffles Place, Singapore.
Oct. 1905	COOPER, JOSEPH A. W., A.M.I.M.E.	P.W.D., Belgaum, India.
A. Oct. 1896 F. May 1900 C.F. May 1904	*COLLINS, HORACE	120, Ebury Street, S.W.
Feb. 1910	CUERDEN, FREDERICK JAMES	Civil Engineering College, Sibpur, Howrah, India.
Oct. 1905	DODD, JOHN HUGH	Kingston, Jamaica, B.W.I.

Dip. No.	Date of Election.	COLONIAL FELLOWS.	Address.
4408	A. Oct. 1904 C.F. Nov. 1909	*EDWARDES, WILLIAM ARNOLD DONALDSON	Government Survey Department, Kuala Lumpur, Federated Malay States.
5565	Oct. 1908	FIRR, THOMAS FREEMAN ..	Zomba, Nyassaland, British Central African Protectorate.
4595	Feb. 1905	FOSTER, EDWARD	Irwin, Montego Bay, P.O., Jamaica.
4168	A. Oct. 1903 C.F. Oct. 1910	*GAIRDNER, KENNETH GRAEME	c/o Royal Survey Department, Bangkok, Siam.
4316	Feb. 1904	GILL, JAMES HERBERT WAINWRIGHT	Messrs. S. Krine and Co., Fort Colombo, Ceylon.
3926	Oct. 1901	GODFREY, CHARLES HENRY, A.M.I.C.E.	Engineer and Surveyor to the Municipal Council, Shanghai.
4179	A. Oct. 1903 F. Nov. 1904 C.F. July 1907	*GRIFFITHS, OWEN	Officina del Ingeniero, Ferro Carril Sud, Calle Guanahani, 322, Plaza Central, Buenos Aires.
4317	Feb. 1904	GURNEY, JAMES STRATTON ..	Thomason Civil Engineering College, Roorkee, India.
3999	A. Oct. 1902 C.F. Oct. 1907	*HEATHCOTT, ROBERT VERNON	Dominion Land Surveyor, Edmonton, Alberta, Canada.
3106	A. Oct. 1896	LEANE, WALTER BURDITT, A.M.I.C.E.	c/o Banco Anglo Sud-Americano, Ltd., Santiago, Chili, South America.
4840	C.F. Oct. 1905	LEMIT, ARTHUR ALFRED ..	Johore, Malay Peninsula.
5566	Oct. 1908		
4461	A. Oct. 1904 F. April 1907 C.F. Oct. 1908	*LINES, ROLAND WALTER ..	110, Jasper Avenue, West Edmonton, Alberta, Canada.
3634	F. Oct. 1900 C.F. Jan. 1904	MCCAW, GEORGE TYRRELL, B.A.I. (Dublin)	Taghnevan, Lurgan, Ireland.
3056	June 1896	MCGAHAN, AMOS HARVEY ..	May Pen, Jamaica, B.W.I.
4031	A. Oct. 1902 F. July 1905 C.F. Oct. 1909	*MAY, PHILIP JOHN	Survey Department, Colombo, Ceylon.
3368	A. Oct. 1901 C.F. Oct. 1910	*MICHELL, JOHN	Royal Survey Department, Bangkok, Siam.
2643	Feb. 1894	MILLER, WILLIAM	Nassau, Bahamas, West Indies.
5583	Feb. 1909	MILLER, WILLIAM AKERMAN	Dominica, B.W.I.
4484	A. Oct. 1904 C.F. June 1910	*NOAKES, ARTHUR ORWHYN..	1314, Fort Street, Victoria, British Columbia.
3114	A. Oct. 1896 C.F. Oct. 1909	*OSBOURN, EDWARD	Public Works Department, Pietermaritzburg, Natal.
3942	Feb. 1902	OSMENT, HARRY SHORTHORSE..	7, Carteret Street, Queen Anne's Gate, S.W., and The Windward Islands, B.W.I.

Date of Election.	COLONIAL FELLOWS.	Address.
Oct. 1908	PALK, DAVID SMITH	Etwell, Poole, Dorset, and Public Works Department, Cape Coast, Gold Coast, West Africa.
Feb. 1906	REID, EDWARD GEORGE ..	P.O. Box 35, Turk Islands, West Indies.
Oct. 1898	ROGERS, COLIN PERCY, CAPTAIN	The Tors, Yelverton, S.O., Devon.
A. Oct. 1903 F. May 1906 C.F. Oct. 1907	*SANDERS, FRANCIS LEONARD	606, Second Street, Edmonton, Alberta, Canada, and 1, Gladstone Park Gardens, Cricklewood, N.W.
Oct. 1906	STOKES, FREDERICK VINCENT	116, Sivewright Avenue, New Doornfontein, Johannesburg, B.S.A.
A. Oct. 1901 C.F. Oct. 1909	*TANNER, WILLIAM HUGH ..	Public Works Department, Nairobi, British East Africa.
Feb. 1906	TUXEN, PETER VILHELM ..	60, Market Street, Melbourne, Australia.
A. Oct. 1903 C.F. Oct. 1910 Feb. 1897	*UNDERWOOD, EDWARD . . . USHER, CHARLES RICHARD ..	P.O. Edmonton, Alberta, Canada. Belize, British Honduras.
Oct. 1910	WATKINS, HARRY	R E. Office, Victoria Barracks, Hong Kong, China
Feb. 1911 A. Oct. 1893 F. Oct. 1897 C.F. Mar. 1909	WHESTON, WRAY WILKINS .. *WHITAKER, ERNEST VICTOR ..	Dilwyn, Thames Ditton, Surrey. 1714, Wood Avenue, Colorado Springs, Colorado, U.S.A.
A. Oct. 1902 C.F. Oct. 1906	*WRIGHT, ARTHUR EDGAR ..	80, Durlston Road, Kingston-on-Thames, Surrey.

Total number of Colonial Fellows, 53.

Students.

Enrolled.	STUDENTS.	Address.
1911	ADAMSON, CLAUDE ALGERNON ..	Shorncliffe, Whitburn, Sunderland.
1911	ADKIN, BENAIAH COLSON	8, Hope Park, Bromley, Kent.
1909	AINLEY, ERIC EDWIN	Martin Bank, Huddersfield.
1911	ALLEN, AUBREY JAMES	Evercreech, Somerset.
1910	ANDERSON, ROBERT GRAHAM ..	The Barton, Cirencester.
1910	ANSELL, DOUGLAS GEORGE	Staple, Canterbury.
1909	ASHWORTH, TOM SPENCER	Dumers Lane, Radcliffe, near Manchester.
1909	BAINES, NOEL	Highlands, Foxley Lane, Purley, Surrey.
1910	BAKER, HAROLD	The Dell, Serpentine Road, Selly Hill Birmingham.
1911	BALDEN, WILLIAM REGINALD ..	Bywell, Leeds Road, Dewsbury.
1908	BALDING, CECIL	16, Hale Gardens, Acton Hill, W.
1910	BALLS, JAMES MAYHEW	100, Edith Road, W. Kensington, W.
1911	BALNE, JAMES WILLIAM	18, Archer's Road, Southampton.
1909	BARKAS, PALLISTER	118, St. George's Terrace, Newcastle-on-Tyne.
1911	BARNARD, ROBERT CYRIL	Heazworth House, Haverhill, Suffolk.
1910	BATH, CECIL ALAN	Stoney Heath, St. John's Road, Orpington, Kent.
1910	BEDELLS, HERBERT SYDNEY GRAFTON	Toft Lawn, Hornsey Lane, Highgate N.
1910	BEESTON, PERCIVAL CLEMENT ..	West View Road, Hemel Hempsted Herts.
1910	BEILBY, ROBERT BUXTON	Belle Vue, Wakefield.
1911	BELCHER, ARTHUR EDWARD IRVING	12, Lawn Road, Haverstock Hill, N.W.
1909	BELL, FRANCIS RICHARD LOWRY..	Alstonby Villa, Westlinton, Carlisle.
1909	BELL, WILLIAM JOHN	Hotel Victoria, Milford-on-Sea, Hampshire.

Enrolled.	STUDENTS.	Address.
1911	BERNARD, RALPH ALAN	26, Orchard Street, Bristol.
1909	BERRY, EDWARD HAMILTON.. ..	Penshurst, Croham Park Avenue, South Croydon.
1909	BEVERIDGE, ARTHUR ROLAND	Waverley, Westbury Road, Wood- side Park, N.
1909	BEVERLEY, RUSSELL	54, Prince of Wales Road, Norwich.
1910	BLACK, ERNEST	55, Balby Road, Doncaster.
1911	BLAND, EDGAR COOPER	Westwood, Colchester.
1908	BLAND, FREDERICK CHARLES.. ..	2, Bury Villas, Southbury Road, Enfield, Middlesex.
1909	BLAND, JOHN COOPER, JUNR.	Westwood, Lexden Road, Colchester.
1911	BLUNDELL, EDWARD PERCY	Zuriel, Dacre Hill, Rock Ferry, Cheshire.
1910	BONE, HUGH	41, Marlborough Road, Falmouth, Corn- wall.
1909	BOOKER, FREDERIC RUSSELL.. ..	34, Mapperley Road, Nottingham.
1911	BOWER, BERNARD BAKEWELL	The Manor, Hawarden, Chester.
1911	BOWES, ALFRED STANLEY	North Holme, Whitburn, near Sun- derland.
1909	BOWES, ARTHUR ALKER.. ..	West Nook, Sandy Grove, Pendleton, Manchester.
1908	BOWMAN, JOHN EDWARD	Messrs. A. Ruller and Sons, Sidney Street, Cambridge.
1910	BRIGG, JOHN HAGGAS	Woodside, near Luton.
1911	BRISSENDEN, CHARLES COOPER	"Butts," Cousley Wood, Wadhurst, Sussex.
1911	BROWN, GEORGE THOMAS SCOT	53, London Road, Stroud, Glos.
1909	BRÜCKMANN, RALPH HERBERT.. ..	70, Woodside Park Road, N. Finchley.
1910	BRUNWIN-HALES, GREVILLE OXLEY	St. Mary's Rectory, Colchester.
1910	BUNT, FREDERICK WILLIAM.. ..	Higham, The Fairfield, Farnham, Surrey.
1908	BURY, WILLIAM NEVILLE BROADBENT	Ash Cottage, Kersal, Manchester.
1909	BUTLER, ERIC	Calcutts, North Hyde, Southall, Middle- sex.
1910	BUTLER, FREDERICK LEONARD	58, Sutton Court Road, Chiswick, W.

Enrolled.	STUDENTS.	Address.
1911	CANN, FREDERICK HOWARD ..	117, High Street, Poole, Dorset.
1909	CARNABY, HAMMOND RIDLEY ..	1, Salisbury Place, South Shields, Co. Durham.
1909	CHAMBERS, CHARLES FREDERICK ..	Springlands, Carter Road, Emerson Park, Hornchurch, Essex.
1910	CHAMBERS, HAROLD JOHN LAVENDER	c/o H. R. Holbeche, Estate Office Chesham, Bucks.
1909	CHAMPION, BRYAN ARTHUR	Linton, Maidstone, Kent.
1910	CHAPMAN, DONALD LE CRONIER ..	c/o J. E. Chapman, Secretary's Office Inland Revenue, Somerset House, W.C.
1910	CHARLES, RICHARD DUDLEY STAFFORD	Broomfield, Stanmore, Middlesex.
1910	CHAUNDLER, CHARLES MAHON ..	Biggleswade, Bedfordshire.
1910	CHAWORTH-MUSTERS, JOHN NEVILLE	Annesley Park, Nottingham.
1907	CHEYNE, ALEXANDER	89, The Struet, Brecon.
1909	CHILWELL, ERIC ROBERT	14, Heathfield Gardens, Chiswick, W.
1910	CHOLMELEY, HUGH RALPH	Monkgrange, Enniscorthy, Co. Wexford.
1910	CHURCHER, LIONEL HENRY	Redcliffe, Alverstoke, Hants.
1911	CLIFFE, TOM FAIRHURST	Model Farm, Garswood, near Wigan.
1910	CLOUGH, EDGAR	Parkfield, Temple Drive, Swinton Manchester.
1909	COALES, HERBERT WALLIS	Council Offices, Skegness, Lincolnshire.
1910	COLBRAN, EUSTACE WM. A... ..	Coombe, Inner Park Road, Wimbledon Common, S.W.
1909	COLLINS, LEONARD KEYTE	Beaudesert, Highfield Road, Moseley Birmingham

Med.	STUDENTS.	Address.
10	COOPER, FRANCIS WILLIAM	5A, North Street, Old Town, Clapham, S.W.
10	CORK, RONALD JOHN	Surveyor's Office, Municipal Buildings, Camberley, Surrey.
10	CORNISH, CHARLES EDWIN	Yeo Vale Cottage, Pitton Bridge, Barnstaple.
11	COSSINS, CHARLES GEORGE	252, Brockley Road, Brockley, S.E.
09	COTTON, MAURICE JOHN	Sunnymead, Bromsgrove, Worcestershire.
10	COUCHER, ALFRED EDWIN RENESON	12, Northwick Terrace, Maida Vale, N.W.
09	COULTHARD, JOSEPH	Faugh Beeches, Heads Nook, Cumberland.
11	COWEN, HERBERT STEWART	Crosslands, Albany Road, Douglas, I. of Man.
09	CROWHURST, WILLIAM THOMAS ..	Berkeley Villas, Lyminge, Kent.
10	DALLEY, REGINALD ARTHUR	The Cedars, Kidderminster.
10	DANIELS, REGINALD ARTHUR	The Birches, Mile End Road, Norwich.
10	DARLINGTON, RALPH SYDNEY	Plas Teg, Llangollen.
10	DARTNALL, JAMES AMBROSE	Forest House, Highstone, Wanstead, Essex.
10	DAVIES, JOHN LLEWELLYN	Surveyor's Office, Municipal Buildings, Barry, Glamorganshire.
11	DAVIS, ROMNEY REUEL	2, East Heath Road, Hampstead, N.W.
09	DELL, LOUIS MICHAEL	3, Routh Road, Wandsworth Common, S.W.
08	DE STACPOOLE, FRANCIS	Mount Hazel, Woodlawn, Co. Galway.
11	DICKIE, JOHN CLARKE	Erskine, Barshaw Hill, Paisley.
09	DICKSON, ARTHUR FRANCIS	Sywell Hall, Northampton.
11	DICKSON, DUNCAN PETER	The Brambles, Iver Heath, Bucks.
10	DOCKING, CARLTON WILLIAM	1, Sydenham Road, Croydon.
11	DODD, ERNEST JOHN	East Common, Harpenden, Herts.
08	DONE, JOHN PAUL CUSSONS	Cricklewood, N.W.

Enrolled.	STUDENTS.	Address.
1908	ECHALAZ, JOHN HARMAN	Gungrog Lane, Welshpool, Montgomeryshire.
1910	ELKINGTON, CHRISTOPHER GARRETT	17, Lower Church Street, Warwick
1908	ELLAM, GEOFFREY WALTER	5, Cavendish Road, Chornton-cum-Hardy, Manchester.
1909	ELPHICK, RICHARD	69, Leith Mansions, Maida Vale, W.
1910	ELSE, CHARLES GLOSSOP	Park Lodge, Fritchley, near Derby.
1909	EMERY, GEORGE MONTAGU	Cromwell House, Broadstairs, Kent.
1909	FAWCETT, ARTHUR JOSEPH	24, Church Street, Salisbury.
1909	FENTON, FRANK	19, St. Margaret's Terrace, Bradford Yorks.
1911	FINN, FRANCIS JAMES	Manor House, Lydd, Kent
1911	FLINT, ARTHUR	Aldersyde, High Wycombe.
1909	FLOOD, ALFRED WILLIAM	11, Dartmouth Street, Westminster S.W.
1910	FREE, DOUGLAS WILLIAM	9, Oxford Road, Abingdon, Berkshire

No.	STUDENTS.	Address.
01	GIBSON, GEORGE PATERSON	63, Grafton Road, Acton, W.
08	GILES, CHARLES MALCOLM	Stonegrove, Edgware, Middlesex.
09	GILL, FRANCIS ANDREW	c/o E. J. Gairdner, Effingham House, Arundel Street, Strand, W.C.
09	GLASIER, PHILIP MANNOCK	7, St. James's Street, S.W.
09	GLEDHILL, SIDNEY VERITY	Holmwood, Kilworth Avenue, South- end-on-Sea.
09	GODDARD, HENRY LESLIE	The Oaks, Knaphill, Woking, Surrey.
11	GOLDBERG, JULIAN MERVYN	Ashleigh, Swansea.
10	GOLDEN, CHARLES HUGHES	Haslemere, Surrey.
11	GOLDING, ROBERT HENRY CHAMBERS	Borehamgate House, Sudbury, Suffolk.
10	GOSSLING, RUPERT EMERSON	8, Earlam Grove, Wood Green, N.
09	GOW, DAVID NEIL	40, Mulgrave Road, Dollis Hill, N.W.
10	GRAHAM, GEORGE ALFRED LEE	28, River View Gardens, Barnes, S.W.
09	GRANGER, WILFRED	Municipal Offices, Nuneaton.
08	GREEN, HARRY RUSSELL TOWNSEND	5, Addison Road, Kensington, W.
09	GREGORY, DOUGLAS	Buena Vista, Penrhyn View, Colwyn Bay.
09	GREGSON, EDWARD MAURICE	Westward, Southport, Lancs.
11	GREGSON, FRANK LESLIE	Eastwood, Western Hill, Durham.
11	GRIFFITHS, JOHN JONES	Queen's Head, West Felton, Oswestry, Salop.
08	GRIMWADE, FREDERICK CLIVE	Orwell House, Campden Road, South Croydon.

Enrolled.	STUDENTS.	Address.
1910	HACK, ADRIAN HENRY	Holmwood, near Dorking, Surrey.
1909	HAILEY, VICTOR	Evesham House, Tring, Herts.
1909	HALL, ERNEST WILLIAM	The Causeway, Horsham, Sussex.
1910	HALL, GEOFFREY HENRY	11, High Street, Woburn, Beds.
1911	HALL, JAMES	Kersal Mount, Kersal, Manchester.
1911	HAMMERTON, REGINALD SYDNEY	Copped Hall Estate Office, Epping, Essex.
1909	HAMMOND, ERNEST WILLIAM FROST	40, Redbourne Avenue, Church End, Finchley, N.
1911	HARDING, CHARLES RICHARD ..	Landrake, St. German's, S.O., Cornwall.
1911	HARLOW, BERNARD JOHN LESLIE	5, Argyll Place, Ryde, Isle of Wight.
1909	HARPER, CECIL KENDALL	Anworth House, Woodford Green, Essex.
1910	HARRIS, WILLIAM EWART.. ..	65, Broad Street, Lyme Regis, Dorset.
1910	HARRISON, VICTOR WELLINGTON..	9, Herbert Place, Lancaster.
1908	HART, ARTHUR REGINALD GLENDOWER	65, Milson Road, West Kensington, W.
1910	HAYWARD, HENRY STEPHEN.. ..	Messrs. Austin and Wyatt, 79, High Street, Fareham, Hants.
1910	HEALE, CHARLES HENRY R... ..	St. Peter's Vicarage, Williton, Somerset.
1908	HENDERSON, LIONEL EDWARD ..	Norhurst, Streatham Common North S.W.
1911	HENDRY, JAMES HORACE	West Hill, Hednesford, Staffordshire.
1910	HENNESSY, JAMES LEO... ..	Park View, Shepton Mallett, Somerset.
1911	HENSHAW, LINDLEY	Fircroft, Davenport, near Stockport, Cheshire.
1911	HEWETT, FRANK CHARLES	71, Abingdon Road, Kensington, W.
1910	HEWETT, WILLIAM RICHARD	Waterfield, Warlingham, Surrey.
1911	HICKS, STANLEY VVYVIAN	29, Lincoln's Inn Fields, W.C.
1910	HILL, CHARLES FREDERICK	Broad Lane, Hawarden, near Chester.
1911	HILL, THOMAS CUTHBERTSON ..	Helvellyn, Ambleside Avenue, Streatham, S.W.
1910	HILTON, OSWALD	98, Whippendell Road, Watford, Herts.
1909	HINXMAN, ROLAND	Kitnocks, St. Thomas Street, Winchester.
1911	HIPPISLEY, HAROLD EDWIN ..	Northam House, Wells, Somerset.
1909	HOBBS, REGINALD ARTHUR	Dixton Road, Monmouth.
1908	HOBBS, WILLIAM BEDO	The Home Farm, Smeeth, nr. Ashford, Kent.
1910	HOLLIS, ARTHUR	The Choristry, Pool-in-Wharfedale, near Leeds.
1910	HOLLIS, VICTOR WILLIAM.. ..	49, The Pantiles, Tunbridge Wells, Kent.
1910	HOLLYWOOD, DAVID	130 Albert Bridge Road, Belfast, Ireland.
1909	HOLTOM, WILLIAM WATKINS BUE	37, Marlborough Hill, N.W.

Colled.	STUDENTS.	Address.
909	HOOKER, WALTER SYDNEY	Beech House, Park Lane, Croydon.
910	HORNBY, GEOFFREY PHIPPS	Knowsley, Prescott, Lancs.
910	HORROCKS, FREDERICK	Victoria Road, Tamworth.
909	HOSEGOOD, FRANK	Aller, Williton, Taunton.
911	HOSKING, WILFRID	Central Chambers, Princess Square, Plymouth.
909	HOUGHTON, JOHN HENRY	Blakesware, Cambridge Road, Teddington.
911	HOWARD, ALGERNON	39, Oxford Row, Putney, S.W.
909	HOWARD, JOHN GULLIVER	Suffolk Place, Porthcawl, Glamorganshire.
911	HUCKLEBRIDGE, SIDNEY EAMES ..	54, St. Leonard's Road, Exeter.
911	HUGHES, LESLIE	Penryn Lodge, Middleton Hall Road, King's Norton, near Birmingham.
909	HUGHES, WILLIAM DONNE PRICE ..	Valuer's Department, Inland Revenue, Carnarvon.
911	HUMPHREYS, REGINALD	Hazlehurst, Neath Road, Maesteg, Glamorganshire.
911	HUNT, MAURICE LEONARD	Cotsford, Uplands Park, Enfield, Middlesex.
909	IRELAND, ERNEST ARTHUR	Kingswood, Gipsy Lane, Putney, S.W.
910	JAMRACH, HENRY CHARLES	3, Avenue Road, Anerley, S.E.
909	JASPER, FREDERICK STEPHENS ..	St. Brannock's, Mason's Hill, Bromley, Kent.
909	JENKINS, GEORGE DENHAM	Kingston, Wareham, Dorset.
910	JOHNSON, PHILIP WALTER	64, Foyle Road, Blackheath, S.E.
909	JONES, FREDERICK BROMFIELD ..	12, Waterloo Road, Newport, Mon.
908	JONES, JOHN OWEN	Pant Afon, Waenfawr, Carnarvon.
911	JONES, JOHN REGINALD	Yanwath, Penrith, Cumberland.
910	JONES, WILFRED ESMOND	2, Firs Avenue, Muswell Hill, N.
909	JONES, WILLIAM OWEN	7, Garth Road, Bangor.
910	KEEN, ARNOLD GRAY	Birkdale, Kidderpore Avenue, Hampstead, N.W.
911	KEIGHLEY, SAMUEL, Jun.	Bleak House, Manchester Road, Burnley, Lancs.
908	KING, CHARLES HERBERT P.	32, Colebrook Avenue, West Ealing, W.
911	KING, HERBERT FORESTER	10, Newlands Park, Sydenham, S.E.

Enrolled.	STUDENTS.	Address.
1909	LA FERME, LEOPOLD	42, Vineyard Hill, Wimbledon, S.W.
1910	LAMBERT, HERBERT	Thornycroft, Kew Road, Richmond, Surrey.
1910	LANE, FRANK DONOVAN	2, Church Street, Christchurch, Hants.
1910	LANGLANDS, CHARLES JOHN LAWRENCE	Hazon House, Epsom.
1908	LANKFER, EDWIN WARRY	5, Norwich Road, Wisbech.
1911	LEATHERDALE, FRANCIS HAROLD ..	12, Station Road, Portslade, Sussex.
1909	LEE, LESLIE STUART	53, Doughty Street, W.C.
1911	LEWIS, CHARLES HENRY	4, Ravenslea Road, Wandsworth Com- mon, S.W.
1911	LEYSHON, WILLIAM	Brynderwen, Ystradgynlais, Brecon.
1911	LINGARD, WILLIAM	Gorsefield, Davenport Park, Stockport.
1911	LYNAM, CHARLES ROY	Marsh Parade, Newcastle, Staffordshire
1910	MCCANN, FELIX CHARLES	78, William Street, Lurgan, Co. Armagh.
1910	MCDOWALL, ARCHIBALD	St. Margaret's, Loughton, Essex.
1910	MCGREGOR, ERIC	20, Gelluvastad Road, Pontypridd.
1911	MACGREGOR, GEORGE CAMPBELL ..	Claremont, Glasgow Road, Perth.
1909	MARIX, REGINALD LENNOX GEORGE	54, Norfolk Square, W.
1911	MARTIN, ALFRED GUY TRICE	St. Mary's Street, Ely, Cambs.
1910	MAYNARD, CHARLES EDWARD	57 Queen's Road, East Grinstead, Sussex.
1911	MILES, HANNAM EDWARD	Slades, East Knoyle, Salisbury.
1909	MILLS, IRWIN STUART	1, Glenmore Road, Belsize Park, N.W.

rolled	STUDENTS.	Address.
911	MORBAY, HAROLD JOHN	Victoria Villa, Victoria Road, Diss, Norfolk.
909	MORRIS, ELLIS	Craigard, Hermon Hill, Wanstead, Essex.
908	MORTON, HAROLD SWITHUN	Foulsham Rectory, Norfolk.
911	NAKAI, UDHAM SINGH	The University, Glasgow.
910	NEWILL, WILFRID MARSTON	Lydbury North, Shropshire.
911	NEWTON, ALAN HERBERT	Morn Dale, Bereweeke Road, Winchester.
908	NICHOLLS, DOUGLAS RICHARD	Borough Surveyor's Office, Yeovil, Somerset.
910	NICHOLS, RAYMOND JOHN	The Towers, Church Street, Bridgewater, Somerset.
911	NIGHTINGALL, CHARLES WILLIAM	49, Eden Street, Kingston, Surrey.
909	NIX, BERTRAM DEEN	2, Terminus Road, Eastbourne.
909	NIXON, FREDERICK	Leominster, College Road, Maidstone, Kent.
910	NORTHCOTT, FRANCIS FREDERICK	Lyon Mead Villa, High Street, Chard, Somerset.
910	OLLIFF, FREDERICK CHARLES	Bonne Vue, Birmingham Road, Lichfield.
910	OPENSHAW, GEOFFREY ORMEROD	Kentisbury Grange, near Barnstaple, N. Devon.

Enrolled.	STUDENTS.	Address.
1910	ORTON-SMITH, GEOFFREY EWING	125, Lordswood Road, Harborne, Birmingham.
1911	OSTLER, WALTER HOLLINGSWORTH	Westleigh, Dunstable, Beds.
1911	PALMER, ROBERT SIDNEY	8, Chaddeley Terrace, Swansea.
1908	PARK, EDWARD	Arrad Foot, Ulverston, Lancs.
1909	PARKER, KINGSLEY CROFT	Woodbury, Cedars Road, Sutton, Surrey.
1910	PARRY, DAVID MORRIS	Gwynfryn, Pwllheli, Carnarvon.
1910	PARSONS, HAROLD CHARLES.. ..	88, St. Andrew's Road, Exmouth, Devon.
1909	PATERSON, THOMAS SIMPSON, JUN.	The Knowles, Mere Farm Road, Oxton, Birkenhead, Cheshire.
1910	PEARCE, DOUGLAS	Quarry House, Aughton, near Ormskirk, Lancs.
1908	PEARCE, HUBERT WILLIE	Milcote Manor, Stratford-on-Avon, Warwickshire.
1911	PENALUNA, ALFRED JOHN	Pencoys, Dartford Road, Dartford, Kent.
1910	PERRIN, FRANK JANES.. ..	Park Lane, Barnstaple, Devon.
1909	PETLEY, BERTRAM	Staple, Canterbury.
1908	PETLEY, GUY	Staple, Canterbury.
1909	PHILLIPS, WILLIAM R.	14, Coverdale Road, Brondesbury, N.W.
1907	PICKARD, EUGENE CUTHBERT	
	LLEWELLYN	Home Farm, Glynde, Sussex.
1908	PIERCE, THOMAS HARLE	The Cayley Estate Office, Colwyn Bay, N. Wales.
1911	PIERSON, PERCY ROACH	Claremont House, Gillingham, Kent.
1911	PIPPARD, ALFRED JOHN SUTTON..	48, Kingston Road, Southville, Bristol.
1911	PORTER, EDWARD LETTINGTON ..	High View Avenue, Grays, Essex.
1909	POWELL, WALTER EVERNDEN	Hillcote, Bideford, Devon.
1910	PRESTON, NORMAN DACRE.. ..	12, Station Road, Dalton-in-Furness, Lancs.
1910	PRICE, ERIC ARTHUR	"Gwynva," Holden Road, Woodsic Park, N.
1910	PRICE, GEORGE STANLEY	"Wyndelyffe," Old Colwyn, North Wales.
1909	PRIDAY, ARTHUR KENNETH	102, Riggindale Road, S.W.
1908	PRIOR, GORDON STEWART	56, Berlin Road, Catford, S.E.
1909	RACKHAM, HAROLD WILFRED	Surveyor's Department, Hendon R.D.C., Great Stanmore, Middlesex.

alled.	STUDENTS.	Address.
11	RADCLIFFE, JOSEPH FRANCIS	
	EDWARD	Hardings Lane, Gillingham, Dorset.
10	REA, JAMES TREVELYAN	3, West Beach, Lytham, Lancs.
08	REAY, ROBERT HENRY	207, Osborne Road, Jesmond, New- castle-on-Tyne.
10	RENSHAW, CHARLES GORDON ..	The Glen, Broughton Park, Man- chester.
10	RICCOMINI, JAMES ARTHUR	Bredgar, near Sittingbourne, Kent.
10	RICHARDSON, CHARLES FREDERICK	
	JAMES	17, The Avenue, Minehead, Somerset.
11	RITCHIE, HUGH VICTOR ORMISTON	Normanton Lodge, Stamford.
11	RITCHIE, WILLIAM TODD	Meckphin, Methven, Perthshire.
07	ROBERTS, ARTHUR CECIL	66, Rosendale Road, Dulwich, S.E.
10	ROBERTS, JOHN HUBERT	Messrs. Thurgood and Martin, 27 Chancery Lane, W.C.
11	ROBINSON, ALFRED KEEN	The Gables, Abbey Park Road, Grimsby, Lincs.
10	ROBINSON, WILLIAM MATHEWS ..	Cargo, Carlisle.
10.	ROSE, FREDERICK CHARLES	5, Sagrave Place, Pittville, Chelten- ham.
11	ROWELL, GUY LENNOX SYDENHAM	Roseland, Marston Ferry Road, Oxford.
11	RUSSELL, ROBERT	2f, Vicarage Mansions, Abbotsford Avenue, West Green, N.
10	RUTHERFORD, JOHN SEYMOUR ..	Highclere, Newbury.
09	RYAN, BERNAL JOHN	18, Ellerdale Road, Hampstead, N.W.
07	SANCTUARY, CAMPBELL THOMAS ..	Mangerton, Melpash, Dorset.
10	SCHMIEDER, CARL FREDERICK	
	GEORGE	Waldorf Hotel, Aldwych, London.
11	SCRUTTON, FRANK SEYMOUR ..	Eltham Lodge, Frinton-on-Sea, Essex.
09	SCURFIELD, ROBERT	8, Bennett Road, Brighton.
10	SEARLE, GILBERT ODELL	The College, Wye, Kent.
11	SHIPLEY, RALPH REGINALD	11, Woodbine Terrace, Gateshead-on- Tyne.
11	SIMPSON, HARRY TREVOR	Carlton, West Park Road, Blackburn.
11	SIMPSON, IVAN L.	Carlton, West Park Road, Blackburn.
11	SIMPSON, WILLIAM LEONARD ..	Horsecroft, Bury St. Edmund's.
09	SKARRATT, RONALD JAMES MARTIN	Farringford, Cheltenham, Gloucester- shire.
09	SKIPPER, REGINALD HAYWARD ..	Sutton Lodge, Ipswich Road, Norwich.
10	SKITMORE, THOMAS	45, Talbot Street, Rugeley, Staffs.
10	SKITT, ROWLAND COLLEY	The Firs, Freshfield, Liverpool.
10	SLADE, REGINALD JAMES	38, High Street, Shrewsbury,

Enrolled.	STUDENTS.	Address.
1910	SMALLMAN, ARTHUR FREDERICK STRONG	Homeside, Devonshire Place, Eastbourne
1910	SMITH, ARTHUR DOUGLAS NOEL ..	Burchetts, Hayward's Heath, Sussex.
1911	SMITH, GEOFFREY	Prinstead Cottage, Winchester.
1909	SMITH, HERBERT GORDON	Sunnyside, Monkseaton, Northumberland.
1911	SMITH, HUBERT JOHN	45, Coleraine Road, Blackheath, S.E.
1911	SMYTH, JAMES	22, St. Edmund's Road, Ipswich.
1911	SNELL, CHARLES FREDERICK ..	230, High Road, Kilburn, N.W.
1911	SOMERS, VICTOR ERNEST GEORGE ..	The Manse, Thurleigh, near Bedford.
1910	SORTWELL, ARTHUR ROBERT ..	17, Hamilton Road, Ealing, W.
1911	SOUTHGATE, CHARLES CROUCH ..	Hale End, Chingford, Essex.
1910	SPAIN, PHILIP CHARLES	"Inglewood" Hawkwood Road, Boscombe, Hants.
1908	SPARKS, WILLIAM HENRY	27, Mowbray Road, Brondesbury, N.W.
1908	SQUIRE, RICHARD STANLEY	28, Christchurch Road, Streatham Hill, S.W.
1910	STAFFORD, HERBERT	206, Bristol Road, Edgbaston, Birmingham.
1910	STARLEY, BERNARD	46, Holyhead Road, Coventry.
1910	STEDMAN, ERNEST WALTER	"Ennerdale," Brownlow-road, Redhill, Surrey.
1911	STILES, ARTHUR	Lincoln House, Ponders End, Middlesex
1910	STRADLING, REGINALD EDWARD ..	6, North Street, Bedminster, Bristol.
1910	STURGE, PAUL DUDLEY	Fern Hollow, Rocklease Avenue, Stoke Bishop, Bristol.
1909	SYKES, CYRIL	Belle Vue, Shoot-up Hill, Cricklewood, N.W.
1910	TANNER, ARTHUR RALPH	18, Kensington Hall Gardens, W.
1910	TAYLOR, GEORGE SCARBOROUGH ..	The Rise, Hoddesdon, Herts.
1909	TEARE, FRANK	10, Crown Street, Peel, Isle of Man.
1909	TEMPLE, RICHARD	Surbiton Lodge, Westgate-on-Sea, Kent.
1910	THOMAS FREDERICK MOWBRAY ..	Town Hall, Ealing, W.

led.	STUDENTS.	Address.
10	THORNE, ARTHUR PERCIVALL ..	Berrington, Sheringham, Norfolk.
11	TIFFEN, THOMAS WILLIAM	142, Warwick Road, Carlisle.
09	TIFFIN, JOHN HALL	142, Warwick Road, Carlisle.
08	TOMSON, MAYNARD	Bedford House, Luton, Beds.
09	TOWNSEND, CECIL PHILLIP	Lawnfield, Castle Hill, Maidenhead.
11	TRENCH, WALLACE TALBOT	3, Mansfield Place, Richmond Hill, Surrey.
11	TRIMMER, FREDERICK GEORGE ..	19, Anstey Road, Alton, Hants.
10	TROTTER, GERARD	Avenue Road, Witham, Essex.
11	TUCE, WILLIAM	Clappersgate, Mayfield Road, Sander- stead, Surrey.
10	TURNER, ALEXANDER WAKEFIELD	Highfield House, Portsmouth Road, Guildford.
11	TURNER, WILFRED EDWARD ..	Yardbrook, Trowbridge.
10	UNDERWOOD, ARTHUR CHARLES ..	7, Beech Street, Fairfield, Liverpool.
11	VANSTONE, STANLEY PAUL	Torbay Park, Paignton, Devon.
10	VAUGHAN-PHILLIPS, CUTHBERT EMRYS	Pantysyfi, Sketty, S.O., Glamorgan- shire.
10	VEAL, WILFRED HENRY	5, Belmont Road, Falmouth.
10	VOICE, HUGH GUY	Wilmington House, East Grinstead, Sussex.
10	VOKES, ARTHUR JAMES	96, Fawnbrake Avenue, Herne Hill, S.E.

Enrolled.	STUDENTS.	Address.
1911	WALKER, STEWART EDGAR	10, Harrison Road, Halifax.
1910	WALKER, WILLIAM ALBERT	94, High Street, Cradley [Heath, Staffordshire.
1908	WALTERS, PERCY THOMAS	35, Colby Road, Upper Norwood, S.E.
1908	WALTHEW, REGINALD BATTERSBY	31, Marmion Road, Sefton Park, Liver- pool.
1909	WARD, ALEXANDER HENRY	Hewton, Bere-Alston, South Devon.
1911	WARD, ARMAND DOUGLAS	Dunloe, Mayfield Avenue, Woodford Green, Essex.
1908	WARD, WILLIAM	Enville Street, Stourbridge.
1910	WATKINSON, HAROLD EDWARD ..	Rosslyn, Rosslyn Road, Billericay, Essex.
1910	WATNEY, RONALD DENDY	5, Church Road, Tunbridge Wells.
1911	WATTS, ALFRED LANCELOT	Elbe House, Whitby, Yorks.
1911	WEBB, MUSGRAVE MAITLAND ..	Westfield, Hatch End, Middlesex.
1909	WELCH, CECIL JOSEPH MARSH ..	The Folley, Dunmow, Essex.
1911	WHITAKER, JOHN	33, Ormerod Road, Burnley, Lancashire
1908	WHITTINGHAM, ROBERT CECIL ..	Estate Office, Hildenley, Malton, York- shire.
1909	WICKHAM, CEDRIC HUMPHREY ..	Congelow House, Yalding, Kent.
1911	WIGGIN, NOEL HOLME	Duchy of Cornwall Office, Shepton Mallet, Somerset.
1910	WILKINSON, SYDNEY CECIL	9, Mount Pleasant, Newmarket Road, Norwich.
1911	WILLIAMS, CHARLES BERNARD ..	Salop House, Oswestry.
1910	WILLIAMS, GWILYM	Penbryn, Dewynock, Breconshire.
1910	WILLIAMS, TOM LAWRENCE	The Leys, Tamworth, Staffordshire.
1911	WILLIS, HOWARD LOESCHER ..	"Broad Meadow," Russell Road, Moseley, Birmingham.
1911	WILLIS, THOMAS	22, Hornby Terrace, Morecambe.
1908	WILLOUGHBY, CHRISTOPHER JOHN	7, Oaklands Road, Bedford.
1908	WILSON, MARSHALL LANG	47, Union Street, Greenock, N.B.
1911	WOOLLEY, JOHN LEYLAND	78, London Road, Gloucester.
1908	WOOLNOUGH, ARTHUR STANLEY ..	The Strands, Hornby, Lancaster.
1911	WRIGHT, GEORGE THOMAS	Stacey House, Crouch Street, Colchester
1910	WRIGHT, JAMES ALEXANDER ..	Melbury, Grange Road, Bushey, Her
1910	WRIGHT, SILVESTER ALBAN	82, Hurst Grove, Bedford.

Med.	STUDENTS.	Address.
99	YOUNGS, SIDNEY	Messrs. Oliver, Appleton and Kitchen, Land's Lane, Leeds.

Total Number of Students, 342.

SUMMARY.

Honorary Members	.. .. .	26
Fellows	.. .. .	1900
Professional Associates	.. .. .	2052
Associates	.. .. .	72
Colonial Fellows	.. .. .	53
Students	.. .. .	342
Total	.. .. .	4445

NOTE.—To ensure the regular transmission of the Papers and Notices, it is regularly requested that any changes of address be communicated at once to the Secretary.

Members Transferred since the Publication of the January List from the Class of Professional Associates to that of Fellows.

BARR, JAMES, JUN. . . .	21, West George Street, Glasgow.
BRAMLEY, FRANCIS HERBERT	6, Paradise Square, Sheffield.
BRIERLEY, HUGH COLLEY . .	City Surveyor's Office, Town Hall, Manchester.
BROWN, WILLIAM ERNEST . .	39, Pepper Street, Chester.
BURKETT-SMITH, CECIL SYDNEY	31, St. Mary Abbot's Terrace, Kensington, W.
CLEMENTS, CYRIL JOHN . .	11, Park Avenue, Mansfield.
COLES, JAMES HATCH	Valuer's Department, 392, High Street, Rochester.
DEACON, STANLEY MARCUS	The Croft, Brownlow Road, Croydon.
FLEURET, ALFRED HARMAN	125, High Holborn, W.C.
FOX, CHARLES EDWARD . .	7, Rawson Street, Halifax.
FRENCH, CECIL GEORGE . .	Newington, Chandos Road, East Finchley, N.
GODDING, FRANK HORATIO . .	Valuation Department, Inland Revenue, South Parade, Northallerton.
HOUGHTON, JOHN GOLD-SMITH	Studland, Woodside Road, Woodford Wells.
HUTCHINGS, WILLIAM ARTHUR	The Hollies, Sutton Coldfield.
INGRAM, JAMES FRANCIS . .	26, Victoria Street, Grimsby.
JONES, URWICK MEREDITH . .	Clyro, Upland Road, Selly Park, Birmingham.
LLEWELLYN, ARTHUR HENRY	Valuer's Office, 3, Offa Street, Hereford.
LOBAN, GUSTAVUS TAYLOR . .	18, Bennett's Hill, Birmingham.
MADGE, WILFRID	Valuer's Department, 4, Lancaster Place, W.C.
MAKINS, JAMES VINCENT . .	30, George Square, Glasgow.
MITCHELL, HAROLD HASTINGS	2, North Parade, Cheltenham.
PETCH, JOHN STONEHOUSE . .	Estate Office, Broughton, Skipton, Yorks.
PRICE, FREDERICK PALEY . .	Crescent Lodge, The Crescent, Surbiton, Surrey.
ROBERTSON, CLEMENT ALBERT	75, Chancery Lane, W.C.
SAUNDERS, ARTHUR PERCIVAL	Messrs. Collins and Collins, 37 South Audley Street, W.
SMALLMAN, HENRY RICHARD	
GEORGE STRONG	8, Queen Street, Cheapside, E.C.
SPARKE, NORMAN LUSH . .	c.o. Shanghai Land Investment Co., 2, Jin Kee Road, Shanghai.
SPENSLEY, JAMES CALVERT . .	County Hall, Spring Gardens, S.W.
STANTON, GEORGE WALTER . .	2, College Road, Harrow, Middlesex.

TAYLOR, EDWIN THURLOW..	Valuer's Department, Market Square, Lancaster.
TITFORD, HORACE JAMES ..	Messrs. Waterer and Dickins, 138, High Street, Bromley.
TURNER, BENJAMIN GEORGE	Church House, Walmer.
VEALE, LOUIS CHARLES ..	72, Finsbury Pavement, E.C.
WEATHERHEAD, DAVID WILKINSON	50, Low Street, Keighley, Yorks.
WEBB, CLARENCE ALBERT ..	7, Church Road, Penarth, Cardiff.
YEATMAN-BIGGS, WILLIAM HUYSHÉ	Shaw House, Tarporley, Cheshire.
YOUNG, CHARLES ALEXANDER	51, Coleman Street, E.C.

Members who have Died or Retired since the Publication of the January List.

FELLOWS :

CARR, CUTHBERT ELLISON ..	Carr-Ellison Estate Office, 38, Colling- wood Buildings, Collingwood Street, Newcastle-on-Tyne.
CHANCELLOR, ALBERT	Adjoining Railway Station, Richmond, Surrey.
CORY, EDWARD JOHN, CAPTAIN	High Street, Rye, Sussex.
DANSKEN, ALEXANDER BROWN	109, St. Vincent Street, Glasgow.
EAMES, EDWARD	Compton, Winchester.
FREUER, WILLIAM.. .. .	West Rudham, King's Lynn, Norfolk.
GILCRIEST, JOHN FAWCETT..	Sligo.
HABGOOD, HENRY CHARLES	Witney, Oxfordshire.
HARDING, EDWARD ERNEST	66, Cannon Street, E.C.
HOLBECHÉ, ROBERT NEVILLE	21, Bennett's Hill, Birmingham.
HUDSON, ALBERT WILLIAM ..	87, Finsbury Pavement, E.C.
JEUDWINE, WILLIAM WYNNE	Chesterfield.
KEMP-SMITH, JAMES FRED..	Orsett, Essex.
KINCAID, JAMES STEWART ..	7, Leinster Street, Dublin.
LEE, ERNEST EDWARD ARTHUR	33, Basinghall Street, E.C.
MACKENZIE, DONALD FALCONER	Estate Office, Mortonhall, Liberton Midlothian.
MILLAR, CHARLES WILLIAM..	46, Pall Mall, S.W.
MUNRO, PHILIP	2, St. Stephen's Chambers, New Baldwin Street, Bristol.

PREEDY, FREDERIC	Caldecote, St. Neots, Huntingdonshire.
SQUAREY, ELIAS PITTS ..	The Moot, Downton, Salisbury, and 15, Great George Street, S.W.
TALBOT-CROSBIE, WM. DAVID	Walcot Bray, Co. Wicklow.
THOMAS, JOHN HENRY	78, Gloucester Road, S. Kensington, S.W.
TOWNSEND, ROBERT	
UNIACKE FITZGERALD ..	18, South Mall, Cork.
TRENCH, PHILIP FRANCIS	
CHENEVIX	30, Kildare Street, Dublin.
WALL, GEORGE YOUNG ..	Exchequer Buildings, Durham.
WATERFIELD, HORACE CLARE	The Hollies, Ripley, Woking, Surrey.

PROFESSIONAL ASSOCIATES :

BOURNE, JAMES ROBERT	
WYKEHAM	36, Temple Street, Birmingham.
COOPER, CAREY	5, Addington Road, Reading.
FERREY, GERALD COLSTON ..	3, Lower Downs Road, Wimbledon, S.W.
MOCKETT, WILLIAM SHER- WOOD	The Orchard, St. Peter's, Thanet, Kent.
PITT, PHILIP SEPTIMUS, M.A. (<i>Cantab.</i>)	132, Dora Road, Wimbledon Park, S.W.
RAMSEY, SIDNEY HERBERT ..	The Grange, Herne Bay, Kent.
RICHARDSON, HAROLD	
THOMAS	3, Wilbury Gardens, Hove.
SPRECKLEY, ROBERT OSCAR	Department of the Interior, Topo- graphical Surveys Branch, Ottawa, Canada.
WHYTEHEAD, JOHN LAYARD	The Vicarage, Warminster, Wiltshire.

List of Members who have gained Prizes at the Institution Examinations.

AMOS, FRANK	Crawter Prize, 1893.
ARIS, JOHN WHITTON	Daniel Watney Prize, 1910.
ARNOTT, JOHN.. .. .	Special Prize, 1885.
ASHTON, ARTHUR WARD.. ..	Beadel Prize, 1902.
BAINES, WILLIAM HENRY	{ Penfold Silver Medal, 1906.
	{ Institution Prize, 1906.
BANKS, FREDERICK STUART A. ..	Penfold Gold Medal, 1898.
BARR, JAMES, JUN.	Scottish Committee Prize, 1909.
BEARN, ARTHUR FREDERICK.. ..	Special Prize, 1909.
BEASLEY, JOHN A. LLEWELLYN ..	Driver Prize, 1891.
BENSON, ROBERT ALAN.. ..	Special Prize, 1884 (Bracketed).
BICKFORD, JOSEPH GRANT	Special Prize, 1897.
BOWDEN, JOHN FRIENDSHIP.. ..	{ Institution Prize, 1891.
	{ Crawter Prize, 1899.
BOYTON, BERTRAM ALFRED	Special Prize, 1902.
BRIERLEY, HUGH COLLEY	Institution Prize, 1900.
BRIGHT, TOM SPENCER	Special Prize, 1908.
BROWN, ARTHUR MACDONALD ..	Driver Prize, 1889.
BROWN, CHARLES GEORGE	Crawter Prize, 1908.
CHAMBERS, THEODORE GERVASE ..	{ Proxime Accessit Prize, 1894.
	{ Penfold Gold Medal, 1895.
CHAPMAN, CHARLES ALBERT	{ Penfold Silver Medal, 1909.
	{ Driver Prize, 1909.
CLEMENTS, CYRIL JOHN.. ..	Penfold Gold Medal, 1911.
COBHAM, GEORGE WILLIAM	{ Special Prize, 1890.
	{ Crawter Prize, 1890.
COWELL, NORMAN	Crawter Prize, 1911.
CROW, PHILIP ARTHUR	Institution Prize, 1908.
DANIEL, HENRY WILKINSON.. ..	Institution Prize, 1896.
DANIELL, FREDERICK STANLEY ..	Special Prize, 1901.
DANNATT, PERCY BOOTHROYD ..	Driver Prize, 1905.
DAVIES, CYRIL FROODVALE	Crawter Prize, 1895.
DENDY, WILLIAM COOPER	Special Prize, 1889.
DIXON, FRANCIS EDWARD	Special Prize, 1888.
DONE, JOHN JAMES.. .. .	Driver Prize, 1887.
DONNE, CYRIL HENRY	Daniel Watney Prize, 1907.
DUTTON, JOSEPH	Driver Prize, 1908.
EASON, EDWARD WILLIAM	Institution Prize, 1893.
EASTER, WILLIAM	{ Driver Prize, 1896.
	{ Penfold Silver Medal, 1896.
EASTON, WALTER JOHN.. ..	Driver Prize, 1893.
EVE, CHARLES GERALD	Crawter Prize, 1898 (Bracketed).
FINN, HERBERT ARCHIBALD.. ..	Special Prize, 1891.
FOSTER, HENRY OSWALD	Institution Prize, 1909.

FREEMAN, GEORGE.. .. .	{ Driver Prize, 1899.
	Penfold Silver Medal, 1899.
GATE, HENRY A. A.	Institution Prize, 1899.
GERMAN, GEORGE	Driver Prize, 1892.
GIBBON, WILLIAM JACOMB	Driver Prize, 1885.
GREEN, FREDERICK ALGERNON ..	Penfold Gold Medal, 1897.
HALL, WILLIAM TIMOTHY	Institution Prize, 1884.
HANCOCK, HENRY SYDNEY, JUN. ..	Special Prize, 1900.
HARRISON, GEORGE J. R.	Special Prize, 1894.
HAZLEDINE, JOHN T. C.	{ Driver Prize, 1902.
	Penfold Silver Medal, 1902.
HEAD, JOHN GEORGE	Crawter Prize, 1891.
HOARE, ARTHUR JOHN	{ Driver Prize, 1903.
	Penfold Silver Medal, 1903.
HOLMES, MONTAGU PRICE	Institution Prize, 1901.
HOOD, THOMAS.. .. .	Daniel Watney Prize, 1901.
HOSEGOOD, ANDREW WEBBER ..	Crawter Prize, 1903 (Bracketed).
HURCOMB, HAROLD FRANCIS.. ..	Special Prize, 1905.
JARMAIN, WILLIAM	Institution Prize, 1894.
JENKINSON, JOHN	President's Prize, 1893.
JESSUP, DAVID POOLEY.. .. .	Crawter Prize, 1907.
JONAS, HARRY MARSHALL	Institution Prize, 1887.
KER, ARTHUR PRESTON.. .. .	Beadel Prize, 1903.
KERR, JOHN MURRAY	Institution Prize, 1897.
KNOWLES, GEORGE POTTER	Galsworthy Prize, 1904.
LINNEY, JOSEPH FREDERIC	Galsworthy Prize, 1909.
LLOYD, DONALD	Institution Prize, 1898.
LOBAN, GUSTAVUS TAYLOR	{ Penfold Silver Medal, 1904.
	Driver Prize, 1904.
	Penfold Gold Medal, 1905.
LORD, FREDERICK WILLIAM	Special Prize, 1906.
MCTAGGART, HUGH HARVEY	Scottish Committee Prize, 1910.
MARSH, FREDERICK STEPHEN	{ Crawter Prize, 1910.
	Penfold Gold Medal, 1910.
MARTIN, ALFRED JOHN	Special Prize, 1893.
MARTIN, HEBER GAMBLING	Institution Prize, 1888.
MATHEWS, HUGH SPENCER	Beadel Prize, 1905.
MAW, PERCIVAL TRENTHAM	{ Crawter Prize, 1903 (Bracketed).
	Penfold Gold Medal, 1903.
MAYNE, ARTHUR JOHN	Institution Prize, 1910.
MEACHER, EDMOND	Institution Prize, 1902.
MERRY, ARTHUR WALKER	Institution Prize, 1890.
MILLS, ROBERT HENRY	Penfold Gold Medal, 1908.
MORRIS, CLIFFORD	Beadel Prize, 1910.
MUIR, JAMES	Institution Prize, 1889.
MURRELL, SYDNEY JAMES	Penfold Gold Medal, 1906.
NEWNHAM, FRANK GEORGE	Crawter Prize, 1904.
NORMAN, CHARLES FREDERICK	{ Special Prize, 1904.
	Galsworthy Prize, 1905.
PARKER, FREDERIC WILLIAM	Daniel Watney Second Prize, 1907

PARTRIDGE, EDWARD JOHN	{ Driver Prize, 1890. Penfold Gold Medal, 1894. Crawter Prize, 1894.
PATEY, GEORGE HEAD	Institution Prize, 1907.
PATON, DAVID LLEWELLYN	{ Driver Prize, 1901. Penfold Silver Medal, 1901.
PEMBERTON, BASIL CHARLES.. ..	Special Prize, 1907 (Bracketed).
PERKINS, WALTER FRANK	Special Prize, 1886.
PETRIE, ALAN ROY.. ..	{ Institution Prize, 1905. Penfold Silver Medal, 1905. Galsworthy Prize, 1908.
PHILLIPS, WILLIAM DEARLOVE	Special Prize, 1887.
PHILPOT, CLIFFORD NEEDHAM	Daniel Watney Second Prize, 1910.
PHYSICK, WALTER FREDERICK	Institution Prize, 1886.
PINEGER, JAMES REGINALD	Crawter Prize, 1900.
PRITCHARD, HENRY	Daniel Watney Prize, 1904.
RAFFETY, HERBERT WILLIAM	Special Prize, 1892.
REED, RICHARD GEORGE GORDON.. ..	Special Prize, 1898.
RICHARDS, ROBERT HERBERT	Beadel Prize, 1909.
RICHARDS, WALTER ROWE	Penfold Gold Medal, 1909.
RICHARDSON, OLIVER ARCHER	Crawter Prize, 1892.
ROBERTSON, CHARLES BOYD.. ..	Scottish Committee Prize, 1905.
ROLLESTON, WILLIAM GUSTAVUS STANHOPE	Institution Prize, 1883.
ROODS, ALFRED	Driver Prize, 1886.
ROOK, JOSEPH TAYLOR	Special Prize, 1896.
RUBINSTEIN, ISAAC	Galsworthy Prize, 1910.
SATCHELL, CHARLES	Special Prize, 1883.
SAVILL, HENRY NORMAN	Crawter Prize, 1906.
SAWYER, JOHN ASHTON.. ..	Daniel Watney Second Prize, 1904.
SELBY, JOHN BASELEY	Special Prize, 1884 (Bracketed).
SHROSBREE, ALBERT DE BOIS.. ..	{ Driver Prize, 1910. Penfold Silver Medal, 1910.
SISSONS, WILLIAM WYRILL	Penfold Silver Medal, 1908.
SMITH, FRANK WILLIAM.. ..	Driver Prize, 1888.
SMITH, HAROLD ROBERT	Beadel Prize, 1904.
SMITH, SYDNEY ARTHUR	{ Driver Prize, 1897. Penfold Silver Medal, 1897. Penfold Gold Medal, 1899.
SPENSLEY, JAMES CALVERT	Crawter Prize, 1905.
SQUIRE, GERALD ROBERT	Institution Prize, 1892.
STEDHAM, PERCY NORMAN	Special Prize, 1910.
SYMONS, GILBERT GEORGE	Beadel Prize, 1906.
TARRANT, WALTER.. ..	Institution Prize, 1881.
TAYLOR, JOHN HENLEY.. ..	Special Prize, 1907 (Bracketed).
TERRY, FRANK TREACHER	Galsworthy Prize, 1911.

THEAKSTON, WILLIAM PEASE	Crawter Prize, 1898 (Bracketed).
THOMAS, CHARLES JOHN.. ..	{ Driver Prize, 1898.
	{ Penfold Silver Medal, 1898.
	{ Penfold Gold Medal, 1900.
TIFFEN, JOHN HENRY	Institution Prize, 1885.
	{ Institution Prize, 1903.
TILLYARD, SIDNEY JOSEPH	{ Penfold Gold Medal, 1907.
	{ Galsworthy Prize, 1907.
TREADWELL, HENRY JOHN	Driver Prize, 1883.
TRENT, WILLIAM EDWARD	Penfold Gold Medal, 1901.
VENNING, HARRY JOHN.. ..	Driver Prize, 1906.
WALKER, WILLIAM SELVES	{ Special Prize, 1895.
	{ Crawter Prize, 1897.
WALLER, WATHEN ARTHUR	Beadel Prize, 1908.
WARMINGTON, HERBERT ANDREW CROMARTIE	Crawter Prize, 1901.
WATSON, HERBERT JOHN	Institution Prize, 1895.
WEBB, JONAS MARSHALL	President's Prize, 1884.
WEETMAN, WILLIAM CHARLES CUM- MING	Penfold Silver Medal, 1907.
	{ Driver Prize, 1900.
WHELDON, MARTIN LOWISH	{ Penfold Silver Medal, 1900.
	{ Penfold Gold Medal, 1902.
	{ Crawter Prize, 1902.
	{ Driver Prize, 1894.
WHITTAKER, JOHN DRONSFIELD	{ Penfold Silver Medal, 1894.
	{ Penfold Gold Medal, 1896.
	{ Crawter Prize, 1896.
WIDDICOMBE, CHARLES EDWIN	Penfold Gold Medal, 1904.
WILLIAMS, HAROLD.. ..	Special Prize, 1903.
WOOD, LESLIE STUART	Daniel Watney Prize, 1900.
WRAIGHT, GEORGE FREDERICK HAROLD	Crawter Prize, 1909.
WYKES, HERBERT IVIE	Galsworthy Prize, 1906.
YOUNG, WILLIAM ROSS.. ..	Scottish Committee Prize, 1906.

List of Provincial Committees.

JULY 1st, 1911.

BEDFORD, ESSEX, HERTFORD, AND MIDDLESEX Committee.

Chairman.

HERBERT TRUSTRAM EVE, 2, St. Paul's Square, Bedford.

BERKS, BUCKS, AND OXON Committee.

Chairman.

DRYLAND HASLAM, JUN., Friar Street Chambers, Reading.

Honorary Secretary.

MARTIN COLLIER DUCHESNE, Farnham Common, Slough, Bucks.

CAMBRIDGE, HUNTINGDON, NORFOLK, AND SUFFOLK

Committee.

Chairman.

WILLIAM PEASE THEAKSTON, Huntingdon.

Honorary Secretary.

LANCELOT GOULDER HAWKINS, Downham Market.

CUMBERLAND AND WESTMORLAND Committee.

Chairman.

HERBERT JOHN WATSON, St. Helen's, Cockermouth, Cumberland.

Honorary Secretary.

THOMAS BROWN, JUN., Prospect House, Holnrook, Cumberland.

DERBY AND STAFFORD Committee.

Chairman.

THOMAS ALFRED FULLER, The College, All Saints', Derby.

Honorary Secretary.

ARTHUR JOHN HOOLEY, The College, All Saints, Derby.

DEVON AND CORNWALL Committee.

Chairman.

ARTHUR PEARSE JENKIN, Trewirgie, Redruth, Cornwall.

Honorary Secretary.

JOHN FRIENDSHIP BOWDEN, Bedford Chambers, Exeter.

HAMPSHIRE, DORSET, AND SOUTH WILTS Committee.

Chairman.

HARRY SAMUEL SENIOR, Sturminster Newton, Dorset.

Honorary Secretary.

HENRY EDWARD DUKE, Maen, Dorchester.

IRISH BRANCH Committee.

Chairman.

PETER DAVID FITZGERALD, Estate Office, Adare, Co. Limerick.

Secretary.

B. J. NEWCOMBE, 110, Grafton Street, Dublin.

KENT Committee.

Chairman.

HERBERT MANSFIELD COBB, Higham.

Honorary Secretary.

ROBERT COBB, Borstal Lodge, Rochester.

LANCASHIRE AND CHESHIRE Committee.

Chairman.

JOHN MARCUS BEAUMONT REA, 8, Winckley Street, Preston, and
Lytham.

Vice-Chairman.

JOHN DAVID WALLIS, 57, King Street, Manchester.

Honorary Secretary.

JOHN HERBERT HALL, 1, Cooper Street, Manchester,
and 2, Dunham Road, Altrincham, Cheshire.**LEICESTERSHIRE, NORTHAMPTONSHIRE, AND RUTLAND
Committee.**

Chairman.

DOUGLAS THEODORE THRING, Boughton House, near Kettering.
Honorary Secretary.MAURICE THEODORE WOOLLEY, Rectory Place, Loughborough,
Leicestershire.**NORTHUMBERLAND AND DURHAM Committee.**

Chairman.

JOHN HUNT HEDLEY, 7, Ashbrook Terrace, Sunderland.

Honorary Secretary.

ARTHUR PRESTON KER, Moothall, Newcastle-upon-Tyne.

NOTTINGHAM AND LINCOLN Committee.

Chairman.

JOSHUA WALKER, Bridge Offices, Bridgegate, Retford.

Honorary Secretary :

EDWARD JAMES TURTON, Horkstow, Barton-on-Humber, Lincolnshire.

SALOP, HEREFORD, AND MID-WALES Committee.

Chairman.

WILLIAM FORRESTER ADDIE, Powis Castle Estate Office,
Welshpool, Montgomeryshire.

Honorary Secretary.

ARTHUR MURHALL HICKMAN, Pride Hill Chambers, Shrewsbury.

SCOTTISH Committee.

Chairman.

JAMES INGLIS DAVIDSON, Saughton Mains, Corstorphine, Midlothian.

Honorary Secretary

WILLIAM FRASER, 209, St. Vincent Street, Glasgow.

SOMERSET, GLOUCESTER, AND NORTH WILTS Committee.

Chairman.

HENRY BURROUGHS NAPIER, Ashton Court Estate Office, Long Ashton, Clifton, Bristol.

Honorary Secretary.

FREDERICK ALLEN STURGE GOODBODY, 33, Corn Street, Bristol.

SURREY Committee.

Chairman.

CHARLES FREDERICK SLATER, 52 & 53, Cheapside, E.C.

Honorary Secretary.

THOMAS BRENT, c/o Messrs. Chesterton and Sons, The Norbury Manor Estate Office, London Road, Norbury, S.W.

SUSSEX Committee.

Chairman.

REGINALD HENRY POWELL, Estate Office, Lewes.

Honorary Secretary.

JOHN CLAY LUCAS, Castle Precincts, Lewes, Sussex.

WALES (NORTH) Committee.

Chairman.

JOHN MERRY PORTER, Estate Office, Colwyn Bay.

WALES (SOUTH) AND MONMOUTHSHIRE Committee.

Chairman.

EDWIN WORTLEY MONTAGU CORBETT, Bute Estate Office, Castle Street, Cardiff.

Honorary Secretary.

FRANCIS HENRY GEORGE OSMOND-SMITH, County Council Offices, Cardiff.

WARWICK AND WORCESTER Committee.

Chairman.

HENRY HENDRIKS, 61, Temple Row, Birmingham.

Honorary Secretary.

ERNEST LAKIN-SMITH, Colmore House, 21, Waterloo Street, Birmingham.

YORKSHIRE Committee.

Chairman.

FRANK GOTT, 3, East Parade, Leeds.

Honorary Secretary.

RICHARD EDGAR HORSFALL, 22A, Commercial Street, Halifax.

Local Distribution of Members under Counties.

The names of those Fellows who are or have been Provincial Chairmen are distinguished thus *.

BEDFORDSHIRE.

(Bedford, Essex, Hertford, and Middlesex Committee).

FELLOWS :

CUMBERLAND, EDWARD ANTHONY..	Luton, and Leighton Buzzard.
ELLIS, ARNOLD ROBERTSON	47, High Street, Bedford.
*EVE, HERBERT TRUSTRAM	2, St. Paul's Square, Bedford.
FIELDS-CLARKE, GEORGE THOMAS..	Estate Office, Southill Park, Biggleswade.
FRANKLIN, BENJAMIN BELGROVE ..	21, Market Hill, Luton.
GRIPPER, JOSEPH EDWARD	47, High Street, Bedford.
MERRY, ARTHUR WALKER	17, High Street, Leighton Buzzard.
PERKS, HUGH EARL	2, St. Paul's Square, Bedford.
SAMUEL, WILLIAM JOHN.. ..	42, Mill Street, Bedford.
TUTT, EDWIN THOMAS	Market Place, Amptill.

PROFESSIONAL ASSOCIATES :

DRUCE, EDRIC.. ..	County Agricultural Institute, Ridgmont, Aspley Guise S.O.
EMERY, DOUGLAS WADE	Valuer's Department, 47, High Street, Bedford.
FENNING, JOHN HENRY.. ..	38, Alexandra Road, Bedford.
FOLL, WALLACE ARTHUR.. ..	Woburn Sands and Toddington.
FOSTER, NORMAN BEAUMONT.. ..	Northridge, Amptill.
GOTELEE, GUY STANLEY.. ..	20, Mill Street, Bedford.
HALL, CHARLES PELL	Park Farm Office, Woburn.
HUBBARD, WILLIAM HENRY GUEST	51, Guildford Street, Luton.
REDFERN, HERBERT WILLIAM ..	20, Mill Street, Bedford.
ROBINSON, JAMES CHARLES EVITT..	Marsh Leys, Kempston, Bedford.
SMITH, HAROLD EZRA	13, Dunstable Road, Luton.
WESTON, JOSEPH AURELIUS	83, High Street, Bedford.
WILSON, MALCOLM MILLAR	47, High Street, Bedford.
WOOLDRIDGE, ARTHUR MAINWARING	49, Goldington Avenue, Bedford.

BERKSHIRE.

(Berks, Bucks, and Oxon Committee).

FELLOWS :

ADKIN, CHARLES DUNCAN	Wantage and Abingdon.
BAILEY, LOUIS HEWITT.. ..	Mereside, White Knight's Road, Reading.
BELCHER, EDWARD JOHN	Wantage.
BINGHAM, ALFRED JOHN.. ..	Nalder Hill House, Newbury.
*BUCKLAND, FRANK BOWRY.. ..	Windsor.

BUCKLAND, HENRY DUNEAU.. ..	Windsor.
BUCKLAND, SIDNEY CRAWFORD ..	Windsor.
BUTLER, ALBERT ERNEST	20, Broad Street, Wokingham.
COOPER, ARTHUR LESLIE.. ..	17, Friar Street, Reading.
COOPER, STANLEY	17, Friar Street, Reading.
DALGLIESH, CHRISTOPHER	57, Albion Place, Reading.
DREWEATT, THOMAS	Newbury.
EGGINTON, DENYS	150, Friar Street, Reading.
*GALE, JOSEPH JOHN	Market Place, Wallingford.
*HASLAM, DRYLAND	Friar Street Chambers, Reading.
*HASLAM, DRYLAND, JUN.	Friar Street Chambers, Reading.
MILLAR, WILLIAM GALT.. ..	1, Arcade Chambers, Reading.
NEATE, ARTHUR WEBB.. ..	8, St. Mary's Hill, Newbury, and Hungerford.
PETO, JAMES WINDER	6, Market Place, Reading.
RICH, ROBERT.. ..	Didcot.
RUTHERFORD, JAMES AUGUSTINE..	Estate Office, Highclere Park, Newbury.
STANFORD, GEORGE	17, Blagrove Street, Reading.
TODD, RICHARD	Englefield, near Reading.
WEBBER, HENRY STANTON	23, Queen Street, Maidenhead.
WHITE, WALTER ERNEST COATES ..	Chatwood, Wokefield Green, Mortimer.

PROFESSIONAL ASSOCIATES :

AUSTEN-LEIGH, LIONEL ARTHUR ..	Wargrave.
BENNETT, MAURICE CHRISTMAS ..	39, Blagrove Street, Reading.
BUNNY, JOSEPH	Carnarvon Estate Office, Highclere, Newbury.
BURDER, REGINALD EDWARD CAMPBELL	Compton, Newbury.
CUNNINGHAM, WILLIAM FREDERICK	57, Albion Place, Reading.
DAVY, CLIFTON ROBERT.. ..	Trevena, Furze Platt, near Maidenhead.
EDGINGTON, WALTER, B.A. (Oxon.)	Nalder Hill, Newbury.
GALE, HAROLD JAMES	Market Place, Wallingford.
GALE, LEONARD FRANKLIN	Market Place, Wallingford.
GREENAWAY, JOSEPH REGINALD ..	10, Southgate Road, Reading.
HAMLYN, JACK	Rivermead, Bray.
HEELAS, RAYMOND JOHN	The Manor House, Earley, Reading.
KEEP, WILLIAM HENRY.. ..	Valuation Department, Inland Revenue. 57, Albion Place, London Rd., Reading.
MAYNE, ARTHUR JOHN	Holme Park Estate Office, Sonning, Reading.
PROCTER, CLAUDE HORACE	Messrs. Giddy and Giddy, Maidenhead.
SHORNEY, ARTHUR SHEPHERD ..	Hayward's Farm, Theale, near Reading.
SIMPSON, LESLIE SHEPHERD	27 and 28, Market Place, Reading.
SMALLBONE, HENRY JAMES	Streatley-on-Thames.
SMITH, EDMUND GEORGE	Valuer's Office, 57, Albion Place, Reading.
TODD, LESLIE EDWARD	Estate Office, Englefield, Reading.
VARDY, CHARLES ALFRED SILVER..	Cliveden Chambers, Maidenhead.
WAPSHOTT, FRANCIS ELLISS	Queen Street Chambers, Maidenhead.

BUCKINGHAMSHIRE.

(Berks, Bucks, and Oxon Committee.)

FELLOWS :

DUCHESNE, MARTIN COLLIER ..	Farnham Common, Slough.
HARRISON, JAMES THOMAS	Town Hall Offices, Buckingham.
*LAWRENCE, ARTHUR	Great Marlow.
LEES, FRANK ARTHUR	District Valuer's Office, High Wycombe.
PEMBERTON, CHARLES OLIVER	
PAGET	Tyringham, Newport Pagnell.
RAFFETY, HAROLD VEZEY	District Valuer's Office, High Wycombe.
*VERNON, ARTHUR	Borshams, High Wycombe.
VERNON, ARTHUR STANLEY	41, High Street, High Wycombe.
WIGLEY, HERBERT HENRY	Winslow.
WIGLEY, SIDNEY PRUDDEN	Winslow.

PROFESSIONAL ASSOCIATES :

BANHAM, EDWARD LONGLEY	Asheroft, Penn.
BAYES, JOHN GEORGE	District Valuer's Office, High Wycombe.
BENJAMIN, ASHLEY FLORIAN	The Chestnuts, Chalfont St. Peter.
BLAKE, ALFRED EVELEIGH	118, High Street, Slough.
FITCH, SIDNEY	District Valuer's Office, High Wycombe.
FOLL, WALLACE ARTHUR	Bletchley and Newport Pagnell.
FROST, ALFRED CARDAIN	Station Approach, Gerrard's Cross Station
GAMBELL, PHILIP CLAYTON	83, High Street, Newport Pagnell.
GODWIN-AUSTEN, ROBERT	c/o Messrs. Beck and Ellis, High Street,
ANNESLEY	Great Missenden.
HAYES, FREDERICK PERCY	The Thornes, New Road, Chesham.
LAIRD, JOHN	High Street, Marlow.
LEE, ALFRED FREDERICK	Conegra, London Road, High Wycombe.
LOCK, CHARLES	District Valuer's Office, High Wycombe.
NASH, EUGÈNE FLEETWOOD	Heathfield, Gerrard's Cross.
ODAM, GEORGE MAXWELL	County Hall, Aylesbury.
OLDHAM, WILFORD	100, High Street, Eton.
PHILLIPS, WILLIAM DEARLOVE ..	High Wycombe.
RAFFETY, PERCY CHARLES	30, High Street, High Wycombe.
SMITH, JAMES	Borough Surveyor's Office, Town Hall,
	Buckingham.
SPENCER, AUBREY VERE	Cuddington, Aylesbury.
STEEL, CHARLES ERNEST	Pinecote, Gerrard's Cross.
WISE, WILLIAM CHARLES	Gerrard's Cross.

CAMBRIDGESHIRE.

(Cambridge, Huntingdon, Norfolk, and Suffolk Committee.)

FELLOWS :

*BIDWELL, CHARLES, M.A. (<i>Cantab.</i>)	Ely.
BIDWELL, JOHN EVANS, M.A.	
(<i>Cantab.</i>)	10, Barton Road, Cambridge.

BIDWELL, PHILIP SHELFORD ..	St. Mary's Street, Ely.
CHALK, HENRY PHILIP	Linton.
*GRAIN, ARTHUR TRESS	66, St. Andrew's Street, Cambridge.
JONAS, HARRY MARSHALL	27, Market Hill, Cambridge.
McILWRAITH, JOHN FORSYTH ..	11, Benet Street, Cambridge.
MARTIN, HEBER GAMBLING	Littleport, Isle of Ely.
*SCRUBY, WILLIAM THOMAS	Post Office Terrace, Cambridge.
WHATLEY, ERNEST JAMES	Saxondale, Rock Road, Cambridge.
WRIGHT, WALTER BRERETON ..	6, Glisson Road, Cambridge.

PROFESSIONAL ASSOCIATES :

DAVIS, WILLIAM HENRY HAROLD ..	2, York Row, Wisbech.
FISHER, EDWIN GRAINGER	23, Lyndewode Road, Cambridge.
FRANCIS, RONALD GARNHAM	103, Hills Road, Cambridge.
GARROD, HERBERT JAMES	Cheveley, Newmarket.
GODWIN, CHARLES FISHER	Ravenscroft, All Saints' Road, New- market.
GRAIN, HENRY HERBERT BRETT ..	66, St. Andrew's Street, Cambridge.
GRAIN, PETER BOVILL	66, St. Andrew's Street, Cambridge.
GRAY, PERCY WILLIAM	29, St. Andrew's Street, Cambridge.
JAMES, HERBERT HAROLD	The Moat, Newmarket Road, Cambridge.
JONAS, SAMUEL MARSHALL	27, Market Hill, Cambridge.
MILLER, FRED	40, Glisson Road, Cambridge.
NUTTER, HUBERT CHARLES	63, Sidney Street, Cambridge.
RUTTER, ARTHUR LIONEL, M.A. (<i>Cantab.</i>)	63, Sidney Street, Cambridge.
SHEDDEN, EDWARD CLAUDE	Cowlinge, Newmarket.
SWORDER, JOHN PERKINS	11, Benet Street, Cambridge.
WEBB, FREDERIC NOEL	Babraham, Cambridge.

ASSOCIATE :

MACKENZIE, KENNETH JAMES |	Department of Agriculture, Cambridge.
JOSEPH	

CHESHIRE.

(Lancashire and Cheshire Committee.)

FELLOWS :

BRADY, RALPH HOLLINSHED ..	17, Warren Street, Stockport.
BROWN, WILLIAM ERNEST	39, Pepper Street, Chester.
CARTWRIGHT, ALFRED STOTT ..	Council Office, Wilmslow.
CORBETT, JOHN ROOKE, M.A. (<i>Cantab.</i>)	2, Spring Bank, Marple.
DAVIES, HORACE FRANCIS, A.R.I.B.A.	Laburnam Cottage, Dee Banks, Chester.
DORNING, ARTHUR HARRY	Holmleigh, Bowdon.

EARLE, JOHN WILFRID	Park Cottage, High Legh, Knutsford.
ELPHICK, GEORGE PELHAM	Inland Revenue, 6, King's Buildings, Chester.
HALL, JOHN HERBERT	2, Dunham Road, Altrincham.
HARGRAVES, STEPHEN	Brabyns Estate Office, Manor House, Marple.
JOHNSON, HARRY LABRON	9, Grafton Road, New Brighton.
JONES, ISAAC M., M.I.C.E.	The Town Hall, Chester.
LINAKER, CHARLES EDWARD	Frodsham.
LORING, JOHN	Doddington, Nantwich.
MCCRACKEN, WILLIAM	Englesea House, Crewe.
*MILLS, WILLIAM EDWARD	57, Hamilton Square, Birkenhead.
NESBITT, JOHN OSCAR	54, St. Peter's Gate, Stockport.
PAIN, COARD SQUAREY	Bebington.
PARKER, THE HON. CECIL THOMAS	Eccleston.
SMITH, JOHN AMBROSE	Estate Office, Tatton Park, Knutsford.
STOCKS, FREDERICK WILLIAM	Town Hall, Middlewich.
SWETENHAM, HENRY	49, North Gate Street, Chester.
WRIGHT, ISAAC THOMAS	61, West Bank Road, Devonshire Park, Birkenhead.
YEATMAN-BIGGS, WILLIAM HUYSHE	Shaw House, Tarporley.
YOUNG, THOMAS JOHN	The Agricultural College, Holmes Chapel.

PROFESSIONAL ASSOCIATES :

BRASSEY, ROBERT EGERTON	Bulkeley Grange, Malpas.
CARSWELL, ARTHUR GEMMELL	Estates Office, Capesthorpe, Chelford.
CORFIELD, ARTHUR KING	Bradley Gate, Northenden.
CROOK, FELIX	3, Clarendon Avenue, Heaton Moor, Stockport.
DAVIES, HAROLD CLIFFE	Burn Lea, Beech Road, Woodhey, Rock Ferry.
EATON, ROWLAND WYNNE	4, Shelton Road, Liscard.
FERRIS, GEORGE WILLIAM	64, Gladstone Road, Chester.
GANDY, ROBERT NEWTON	The Hollies, Acton Bridge.
GRIERSON, JOHN CAMPBELL	Carperby, Mount Wood, Prenton Hill.
HINDMARSH, MICHAEL ANSELM	Glenmore, Glenmore Road, Oxtan.
JOHNSON, HERBERT DAVIES	54, St. Peter's Gate, Stockport.
LOVE, JAMES BARR	The College, Holmes Chapel.
MILNES, CHARLTON	57, Hamilton Square, Birkenhead.
PAIN, COARD HENRY	Bebington.
PRICE, JOHN ROWLAND	The Elms, Sandbach.
PYE, GEORGE HENRY	Rocklyn, Barkers Lane, Ashton-on- Mersey.
RICHARDS, DANIEL HERBERT	1, Mellor Road, Prenton, Birkenhead.
RIGHTON, CHARLES SHIRT	St. Martin's Road, Marple.
ROBERTS, JOHN	Churton Villa, Tarvin Road, Chester.
SHELDON, HAROLD	Kinderton Street, Middlewich.
SLADE, ISAAC	3, Claremont Road, West Kirby.

MALLON, JOSEPH FRANCIS	.. ..	1, Bold Square, Chester.
VOYCE, JOHN	.. ..	6, King's Buildings, Chester.
VITHAM, JAMES BERNARD	.. ..	Thurleigh, Priory Road, Sale.
WRIGHT, CHARLES ERNEST	.. ..	Glan Aber Park, Hough Green, Chester.

CORNWALL.

(Devon and Cornwall Committee.)

FELLOWS :

DEDDALL, HERBERT BOWMAN, N.D.A.	29, Lemon Street, Truro.
FARNELL, SYDNEY GEORGE	Public Rooms, Truro.
JENKIN, ARTHUR PEARSE	Trewirgie, Redruth, Cornwall.
KITTOW, JOHN	West Holm, Launceston.

PROFESSIONAL ASSOCIATES :

BRIGHT, TOM SPENCER	Lynton Villa, Tehidy Road, Camborne.
BULTEEL, WALTER GORDON	Pencalenick Estate Office, Truro.
BURBIDGE, JOHN SAVILLE	Springfield, St. Minver, near Wade- bridge.
DOWELL, HERBERT LEE	Central Chambers, Newquay.
LANCOCK, HENRY SYDNEY, JUN.	Sydney Place, St. Austell.
MOSKING, HAROLD ARTHUR	Hill Crest, Landrake, St. Germans.
MULIAN, WILLIAM FRANCIS	4, Victoria Parade, Newquay.
MAWRY, WILLIAM ARTHUR	Tharsis Villa, Calstock.
MYNE, HARRY	The Crescent, Truro.
BLACKENZIE, HECTOR JOHN MAXWELL	Granville Estate Office, Bude.
PETER, ARTHUR GRANVILLE	Northernhay, Launceston.
TANIER, THOMAS MACPHERSON	Duchy of Cornwall Office, Liskeard.
THOMAS, JAMES HUGH TREMAYNE	Tregays, Lostwithiel.
RESIDDER, HENRY EDMUND	7, Marlborough Road, Falmouth.

CUMBERLAND.

(Cumberland and Westmorland Committee.)

FELLOWS :

BIRKETT, TOM	Foxton House, Penrith.
LAYTON, JOSEPH WILLIAM	9, Bank Street, Carlisle.
ESKETT, WILLIAM JAMES	St. Andrew's Churchyard, Penrith, and Viaduct Chambers, Carlisle.

LAWRENCE, CHARLES PHILLIPS ..	8, Carleton Gardens, Stanwix, Carlisle.
LITTLE, WILLIAM	Hutton Hall, Penrith.
LOCKHART, PETER	Heads Nook, Carlisle, and Viaduct Chambers, Carlisle.
NUTTER, JOHN	2, Marlborough Gardens, Stanwix, Carlisle.
POTTS, JAMES	Estate Office, Workington.
RICHARDSON, GEORGE	5, Lonsdale Street, Carlisle.
ROOK, JOSEPH TAYLOR	23, Spencer Street, Carlisle.
SLY, WILLIAM	Estate Office, Somerset House, White haven.
*STANLEY - DODGSON, STANLEY DICKINSON	Estate Office, Somerset House, White haven.
*WATSON HERBERT JOHN	St. Helen's, Cockermouth.
WATT, ALEXANDER	Muncaster Estate Office, Ravenglass.
WILFORD, CECIL MARSHALL	Cathedral Chambers, Castle St., Carlisle.
WOOF, ROBERT STEPHENSON.. ..	Lowther, Penrith.

PROFESSIONAL ASSOCIATES :

BASTABLE, JOHN DANIEL	48, Scotland Road, Stanwix, Carlisle.
BROWN, THOMAS, JUN.	Prospect House, Holmrook.
DALZELL, WILLIAM DICKINSON ..	"Stoneleigh," Stanwix, Carlisle.
DODGSON, EDWARD HUGHES.. ..	Derwent House, Cockermouth.
HARLOW, WILLIAM WYATT RIDG- WAY, A.M.I.C.E.	City Surveyor's Office, Carlisle.
HESKETT, WILLIAM DONALD	The Hollies, Penrith.
MARTIN, FRED SCOTT	79, Main Street, Keswick.
MILLER-CROOK, HERBERT	106, Warwick Road, Carlisle.
ROWLANDSON, GEORGE ARMSTRONG	5, Lonsdale Street, Carlisle.
WATT, ALEXANDER LINDSAY.. ..	Derwentwater Estate Office, Keswick.

ASSOCIATE :

HILL, JOHN SMITH, B.A., B.SC. (*Lond.*) | The Agricultural College, Aspatria.

DERBYSHIRE.

(Derby and Stafford Committee).

FELLOWS :

BARNES, GEORGE FREDERICK ..	New Square, Chesterfield.
*BRAILSFORD, HENRY	Park Nook, near Derby.
CLAY, WILLIAM HENRY CHRISTY, A.M.I.C.E.	Estate Office, Midland Railway, Derby.

FULLER, THOMAS ALFRED	The College, All Saints', Derby.
LARRISON, JOHN EDWARD	Estate Office, Allestree, near Derby.
MOOLEY, ARTHUR JOHN.. ..	The College, All Saints', Derby.
MUBBERSTY, HENRY ALFRED ..	Buxton.
MUSSEY, ROBERT	Birch Garth, Mickleover.
NENNER, WILLIAM	6, Gluman Gate, Chesterfield.
LONGSDON, ERNEST MOREWOOD ..	The Hollow, Little Longstone, Bakewell, and 6, Gluman Gate, Chesterfield.
MAY, THOMAS HENRY	Haslin House, Harpur Hill, Euxton.
MAILYOUR, ALEXANDER	Collycroft House, Ashbourne.
MORPE, CHRISTOHER	56, St. Helen's Street, Chesterfield.
MOMLINSON, THOMAS	2, St. James's Street, Derby.
MVILLS, ARTHUR HARVEY	32, Full Street, Derby.

PROFESSIONAL ASSOCIATES :

MATTLEE, EDWARD GUY	Green Lane, Burbage, Buxton.
BUNTING, ALFRED HENRY	Glendon, Knowleston Place, Matlock.
CULVERWELL, WALTER	Dwr Gwin, The Dale, Matlock Bath.
EATON, HAROLD	6, Gluman Gate, Chesterfield.
ELWELL, LAURENCE VIVIAN	Estate Office, Midland Railway, Derby.
ENTWISTLE, CHARLES CARRUTHERS	Southgarth, Buxton Road, Chinley.
HINGSTON, CECIL VICTOR	28, Friar Gate, Derby.
HUDSON, HENRY	Fern Bank, Stonegravels, Chesterfield.
JONES, DAN IVOR	32, Full Street, Derby.
MCCALLUM, PETER SERVICE	Midland Railway, Derby.
MARSHALL, TOM OWEN	Estate Office, Midland Railway, Derby.
MARSHALL, WILLIAM THOMAS, M.A. (Oxon.)	Lindenhurst, Chesterfield.
NEWTON, JOHN LEES	The Chevin, Belper.
OGDEN, FREDERICK SORESBY ..	The Yews, Stanley, near Derby.
THOMPSON, FREDERICK HUBERT ..	20, Kedleston Road, Derby.
TOWNLEY, HERBERT LIONEL.. ..	Lyndhurst, Empress Road, Derby.
WRIGHT, ERNEST BERESFORD	
FITZHERBERT	Yeldersley Hall, Derby.
YORKE, MAURICE FRANCIS	Estate Office, Sudbury, Derby.

DEVONSHIRE.

(Devon and Cornwall Committee.)

FELLOWS :

BARKER, GEOFFREY LIONEL ..	Teigngrace House, Teigngrace, Newton Abbott.
BODDINGTON, PERCY EDGAR.. ..	Inland Revenue, 51, Queen Street, Exeter.

*BODY, ARTHUR, A.R.I.B.A.	12, Princess Square, Plymouth.
BOURNE, ROBERT ELLIOTT	Elwell, Totnes.
BOWDEN, HARRY	Wilts and Dorset Bank Chambers, George Street, Plymouth.
BOWDEN, JOHN FRIENDSHIP	Bedford Chambers, Exeter.
*COOPER, JOHN GROVES	Bideford.
CORDEROY, ATHELSTANE	Endgate, Tiverton.
*DREW, HENRY	15, Queen Street, Exeter.
DREW, HENRY ALBAN	15, Queen Street, Exeter.
*DREW, JOHN GOULD, B.A. (<i>Oxon.</i>)	15, Queen Street, Exeter.
ELLIOTT, CHARLES	20, Ermington Terrace, Plymouth.
*ELLIS, ALBERT EDWARD	Bedford Chambers, Exeter.
FENTON, ADAM DOUGLAS	Maristow Estate Office, Roborough.
FOX, FREDERICK RUSSELL	Grove Hill, Barnstaple.
FROST, FREDERIC CORNISH	Teignmouth.
GALBRAITH, SAMUEL HOUGHTON, MAJOR, M.A. B.E. (<i>Dublin</i>)	Royal Engineer Office, Devonport.
LOCK, WILLIAM HENRY	Instow.
LUCAS, JOHN ARCHIBALD, A.R.I.B.A.	Guildhall Chambers, High Street, Exeter.
*MICHELMORE, ALFRED	Gate House, Totnes.
PARSONS, MAURICE HARRY DONNE	51, Queen Street, Exeter.
PEARSE, THOMAS WILLIAM	The Green, Modbury.
PEARSE, WILLIAM	Stoliford, Modbury.
PINSENT, FRANCIS WINGFIELD HOMFRAY	Inland Revenue, Barclay's Bank Chambers, Plymouth.
POWELL, CHARLES REGINALD EVERNDEN	Bridge Chambers, Bideford.
RENDELL, ARTHUR STEPHEN	Market Terrace, Newton Abbot.
*RUNDLE, EDWARD COLLINS	Bedford Office, Tavistock.
SCOTT-SMITH, ARTHUR COURTNEY . .	16, Gandy Street, Exeter.
*SMYTH - RICHARDS, GEORGE COBLEY	Estate Office, Castle Hill, near South Molton.
STAPLEDON, ERNEST ALLEN	Bridge Chambers, Bideford.
STOOKE, JAMES	Courtenay Street, Newton Abbott.
STUDDY, THOMAS EDWARD	Mazonel, Stoke Gabriel, Totnes.
TAYLOR, THOMAS WILLIAM HARRIS	Estates Office, Killerton, Exeter.
*THORNE, ARNOLD, F.R.I.B.A. . . .	Barnstaple.
TORY, JOHN EDWARD	Inland Revenue, 50, Queen Street, Exeter.
WARD, DANIEL	Hewton, Bere Alston.
*WARD, FRANK	Burnville, Tavistock.
*WARE, CHARLES EDWIN, M.I.C.E. . .	Gandy Street Chambers, Exeter.
WHITTON, PERCY	24, Gandy Street, Exeter.
WRIGHT, GEORGE JOHN, CAPTAIN . .	Royal Engineer Office, Town Barracks Exeter.

PROFESSIONAL ASSOCIATES :

BARRONS, BERTRAM ALONZO	Devon Estate Office, Powderham, Exeter.
BLISS, THEODORE STEPHEN	Bedford Office, Tavistock.
BRAY, JOHN SANDERS	Ogbear Estate Office, Holsworthy.
BUTLER, THOMAS LIONEL	Park Hill, Ipplepen.
CHAMPERNOWNE, AMYAS WALTER..	Sidbury Manor Estate Office, Sidbury, Sidmouth.
DREW, JOHN DENYS	15, Queen Street, Exeter.
EDWARDS, SPENCER.. ..	11, Cross Street, Barnstaple.
EGREMONT, JOHN	Dartington Estate Office, Totnes.
ELLIS, ARTHUR ORANGE.. ..	70, St. Aubyn Street, Devonport.
FOLLAND, GORDON RADMORE ..	8, Fort Terrace, Barnstaple.
GRIFFITHS, CHARLES HENRY WILLIAM	Seaward, Exmouth.
HASLEHUST, ERIC THOMASSET ..	Manor Office, Yealmpton.
HOLDITCH, CHARLES STANLEY ..	40, Hillside Avenue, Plymouth.
HOLE, WILLIAM GERALD	Cranford Mount, Exmouth.
LAKE, WALLACE STICKLAND, A.M.I.C.E.	c/o J. R. Lake, 2, Marlborough Road, Plymouth.
LUMLEY, FREDERICK ROBERT ..	Mamhead Park, Exeter.
MATTHEWS, DOUGLAS PERCIVAL ..	15, Grimstone Terrace, Plymouth.
NETTEN, PERCY JOHN	16, Manor Street, Stonehouse.
PAGE, EDMUND	Bedford Estate Office, Tavistock.
PERKINS, SAMUEL BARCLAY	33, Emma Place, East Stonehouse, Plymouth.
PINCKNEY, HENRY CHRISTOPHER ..	The Estate Office, Stoodleigh, Tiverton.
SAUNDERS, EDWARD YOUNGS ..	Borough Surveyor's Office, Barnstaple.
SHEARER, JAMES HUGHAN, A.R.I.B.A.	Stuckey's Bank Chambers, 253, High Street, Exeter.
SOUTHCOTTE, JOHN CHARLES.. ..	Bridge Buildings, Barnstaple.
THORNE, HARMAN	The Square, Barnstaple.
THWAITES, ARTHUR MILBANK ..	Messrs. Cunningham and Gibaud, Lloyd's Bank Chambers, Bedford Street, Plymouth.
VANSTONE, FREDERICK WILLIAM ELLIOTT	Torbay Park, Paignton.
VOISEY, PERCY DEERING	4, Princes Street South, St. Thomas, Exeter.
WARD, EDWARD JOHN	St. Aubyn Street, Devonport.
WINDER, GEORGE MAURICE	Fairmile, Ottery St. Mary.
WONNACOTT, JAMES PALMER.. ..	Tollards, Countess Weir.

ASSOCIATE :

MILLES, CHARLES WILLIAM	Tregenna, The Beacon, Exmouth.
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DORSETSHIRE.

(Hampshire, Dorset, and South Wilts Committee.)

FELLOWS :

CANDY, WALTER EMMANUEL	Encombe, Wareham.
CLIFTON, JAMES EDWARD, F.R.I.B.A.	Swanage.
*DAY, GEORGE CARLETON	Estate Office, Woodbridge, Shaftesbury.
*DUKE, EDWARD	Dorchester.
*DUKE, HENRY	Dorchester.
ELFORD, JOHN	King Street, Poole.
MEABY, THOMAS JAMES	Canford Estate Office, Wimborne.
RAWLENCE, JAMES	The Estate Office, Wimborne.
*RICHARDS, GEORGE EDWARD ..	Stour Lodge, Wimborne.
*SANCTUARY, CAMPBELL FORTESCUE STAPLETON	Mangerton, Melplash.
*SENIOR, HARRY SAMUEL	Sturminster Newton.
YOUNG, HARRY AUSTIN LINDSAY	Eastney, Weymouth.

PROFESSIONAL ASSOCIATES :

DALE, EDWARD SYDNEY WILSON ..	28, High West Street, Dorchester.
DUKE, AUGUSTUS BARNABY CYRIL	Maen, Dorchester.
DUKE, HENRY EDWARD	Maen, Dorchester.
INGRAM, EDWARD CECIL	The Bungalow, Sturminster Newton.
LLOYD, SYDNEY HAMILTON	Holcote, Parkstone Road, Poole.
MITCHELL, WILLIAM CHALMERS ..	Gresford, Dorchester.
PRITCHARD, ANDREW BADEN ..	Valuer's Office, 28, High West Street, Dorchester
RANKIN, ERNEST ALFRED	Somerville, Bourton.
ROYDS, GEORGE FREEMAN	District Valuer's Office, Inland Revenue, Dorchester.
SARGENT, AUGUSTUS MONTAGUE ..	Valuer's Office, 28, High West Street, Dorchester.
WAY, LIONEL HUGH	Valuer's Office, 28, High West Street, Dorchester.

DURHAM.

(Northumberland and Durham Committee).

FELLOWS :

*BRYDON, ROBERT	The Dene, Seaham Harbour.
CLARK, NATHANIEL	Tanfield Hall, Tantobie, S.O.
CLARK, NATHANIEL, JUN.	Tanfield Hall, Tantobie, S.O.
COCHRANE, WILLIAM JAMES	15, Thornhill Terrace, Sunderland.
CURRY, HENRY JOHN	58, High Street, Stockton-on-Tees.
*EADE, ARTHUR W. F., M.A. (<i>Cantab.</i>)	Branson House, Darlington.

GREGSON, WILLIAM.. .. .	106, Victoria Road, Darlington.
*HEDLEY, JOHN HUNT	7, Ashbrook Terrace, Sunderland.
MILLER, JOHN EZRA, A.M.I.C.E. ..	4, Brookside Terrace, Sunderland.
OLIVER, CHARLES EDWARD	Selby Lodge, Consett.
*PEIRSON, HENRY THOMAS	Brancepeth.
RODHAM, JOHN.. .. .	16, Finkle Street, Stockton-on-Tees.
ROWLANDSON, SAMUEL MESSITER, CAPTAIN.. .. .	The College, Durham.
SOUTH, ARTHUR EDWARD	1, Victoria Road, Darlington.

PROFESSIONAL ASSOCIATES :

AITON, ROBERT SCOTT	Estate Office, Croxdale.
ASKWITH, ARTHUR.. .. .	9, Mount Joy, Durham.
BAILEY, ALFRED HORACE	15A, Old Elvet, Durham.
BURKITT, HAROLD, M.SC. (<i>Durham</i>), N.D.A.	Springwell Villas, Bishop Auckland.
GORE, GEORGE PYM.. .. .	81, Bondgate, Darlington.
HARRISON, ARTHUR.. .. .	69 & 70, High Street, Stockton-on-Tees
HEDLEY, THEODORE FENWICK	1, Elms West, Sunderland.
PEGGE, JOHN THOMAS	City Surveyor's Office, Durham.
WATSON, NOEL BRADY	Westover, Low Fell.
WEIR, JAMES SCOTT, A.M.I.C.E. ..	Town Hall, Jarrow.

ESSEX.

(Bedford, Essex, Hertford, and Middlesex Committee.)

FELLOWS :

AUSTIN, FRANK HOLMAN	Church Hill, Epping.
BROOK, HARRY	59 and 60, West Stockwell Street, Colchester.
CHANCELLOR, FRED, F.R.I.B.A. ..	Chelmsford.
CHETWOOD, STEPHEN	Waltham Abbey.
COVERDALE, FREDERICK JOHN ..	Ingatstone Hall.
DANIELL, FREDERICK STANLEY ..	Head Gate, Colchester.
DAWSON, CHARLES FORD	Public Offices, Barking.
ELWELL, WILLIAM HENRY	The Cottage, Dovercourt.
HILLIARD, GEORGE EDWARD	Chelmsford.
HOUGHTON, JOHN GOLDSMITH ..	Studland, Woodside Road, Woodford Wells.
LIVING, ROBERT	High Street, Hornchurch.
MOXON, HERBERT WILLIAM, MAJOR	Royal Engineer Office, Abbey Field, Colchester.
NEWMAN, THOMAS HARRY	49, High Street, Braintree.
NOCKOLDS, ALFRED GEORGE	Saffron Walden.
PARKER, CHARLES ALFRED	Woodham, Mortimer Place, Maldon.
RIPPENGAL, ARTHUR HENRY.. ..	Brentwood.
SLATER, ERIC ARNOLD	Town Hall, Colchester.
STANFORD, CHARLES MAURICE ..	23, High Street, Colchester.

START, JOSEPH WILLIAM.. ..	Cups Chambers, High Street, Colchester.
*STRUTT, THE HON. EDWARD GERALD	Whitelands, Hatfield Peverel, Chelmsford. Coggeshall.
SURRIDGE, JOSEPH SMITH	High Street, Epping.
SWORDER, HUGH	Southend-on-Sea.
TAPP, ARTHUR	Bocking, Braintree.
VAIZEY, JOHN GEORGE	52, Boston Avenue, Southend-on-Sea.
VICKERS, ARTHUR CRANSTOUN ..	Glenmore, Tavistock Road, Snaresbrook.
WYLES, JOHN WALTER	

PROFESSIONAL ASSOCIATES :

ANDREWS, ARTHUR GEORGE, LIC.R.I.B.A.	Borough Surveyor's Office, Town Hall, Colchester.
ANSTEAD, SYDNEY HERBERT.. ..	9, Eastern Road, Romford.
AUBREY, WILLIAM BEAUCHAMP ..	Springfield, Chelmsford.
BACON, FRANK	Sprowston, The Drive, Snaresbrook.
BALSTER, STEPHEN	94, Lansdowne Road, Seven Kings, Ilford.
BARTLETT, ROBERT DUDLEY	8, Winton Avenue, Westcliff-on-Sea.
BUTLER, REGINALD	13, Lambourne Road, Seven Kings.
CHANNON, HERBERT EDWARD ..	Ashleigh, Grove Hill, Woodford.
CLARK, DUNCAN WALTER	3, High Street, Colchester.
COLLYER, CHARLES ALEXANDER STEWART	Estate Office, Chesterford Park.
COMMANDER, CHARLES CURTIS ..	21, Brisbane Road, Ilford.
COWLEY, HERBERT REGINALD ..	132, High Street, Southend-on-Sea.
DAWSON, REGINALD	16, Cambridge Road, Barking.
FIELD, VICTOR	Whitehall, Longbridge Road, Barking.
FIFE, JAMES DONALD	Seaview, Seaview Road, Leigh-on-Sea, S.O.
FOSKETT, HENRY	50, Seymour Gardens, Ilford.
FOSTER, HENRY OSWALD	Newton House, Loughton.
GAY, FRANK	Eastbrook End, Seven Kings.
GILBEY, PERCY HAMMOND	403, High Road, Ilford.
GINGELL, JOHN TAYLOR.. .. .	Elmwood, Epping.
GRANT, JOHN YATES	Crown House, Newport.
GREGORY, CHARLES HENRY	47, New Fillebrook Road, Leytonstone.
GRIMWADE, HENRY.. .. .	Colchester.
HALLIDAY, GEORGE ARTHUR ..	4, Goodmayes Avenue, Goodmayes.
HART, HERBERT EDWARD	Debden Road, Saffron Walden.
HATT, WALTER.. .. .	66, Duke Street, Chelmsford.
HAWKE, ROLAND WELSTEAD.. ..	Valuer's Office, 59 and 60, West Stock- well Street, Colchester.

HAYWARD, WILLIAM HANSELL ..	7, Eastern Road, Romford.
HILLIARD, HUGH NEVILLE	Chelmsford.
HOUGHTON, EDMUND GUY	Pine Lodge, Whitehall Road, Woodford Green.
HUTLEY, EDWARD	The Chestnuts, Wigborough, Colchester.
KEMSLEY, WILLIAM HUGH	Woodford Green.
MELLOWS, FREDERICK WILLIAM ..	Northbrook Lodge, Lansdowne Road, Woodford.
MORTON, HUGH	Bransfield, Eagle Lane, Snaresbrook.
NEIL, DAVID MAXWELL	Park Estate Office, Leigh Road East, Westcliff.
NOCKOLDS, MARTIN CHARLES	.
HUBERT	Saffron Walden.
PEMBERTON, BASIL CHARLES ..	59 and 60, West Stockwell Street, Colchester.
PHILLIPS, GEORGE CAWKWELL ..	Chelmsford.
PHILLIPS, FRANCIS JOHN	Albury, Queen's Road, Springfield, Chelmsford.
PLUMB, FRANCIS CLARKSON ..	Heath Drive, Gidea Park, Romford.
POVEY, STEPHEN GODDARD	Messrs. Talbot and White, 9, Hamlet Court Road, Westcliff-on-Sea.
PRATT, FRANK PERCY	9, Eastern Road, Romford.
RAYSON, WILLIAM JAMES	Clarence House, Clarence Street, Southend-on-Sea.
ROBINSON, MARTIN CATLIN	Wenden, Saffron Walden.
ROGERS, JOHN RUSSELL	6, High Street, Malden.
SANSOM, WILLIE STANLEY VENN ..	71, East Hill, Colchester.
SHARPLESS, ARTHUR	Granville, Victor Drive, Leigh-on-Sea.
SMALL, LEONARD JOHN	Woodford Urban District Council, Woodford Green.
SORRELL, HAROLD VALENTINE ..	Clarence Chambers, Clarence Street, Southend-on-Sea.
STONEHAM, FREDERIC MARTYN ..	48, St. Thomas' Road, Brentwood.
STRUTT, JOHN JAMES	Whitelands, Witham.
SYMONS, GILBERT GEORGE	County Council Offices, Shire Hall, Chelmsford.
TALLBOY, FREDERICK JAMES ..	4, Kensington Gardens, Cranbrook Park, Ilford.
TAYLOR, ERNEST	52 Roman Road, Colchester.
TEMPLE, ALFRED	The Clarence Street Estate Office, Southend-on-Sea.
TIGHE, ARTHUR	White Wick, Clacton-on-Sea.
TITTERTON, SYDNEY GEORGE PENN	Tram Terminus, Southchurch, Southend-on-Sea.
TOWNLY, RONALD STARKEY ..	Maplethorpe, Canewdon Road, Westcliff-on-Sea.

WAYMOUTH, JOHN KENNERLEY ..	Clarence Street Estate Office, Southend-on-Sea.
WALLACE, CHARLES ADAM	2, Empress Avenue, Ilford.
WALTER, SYDNEY JAMES	Ecclesbourne, New Wanstead.
WICKENDEN, ARTHUR FRED.. ..	175, Balfour Road, Ilford.
WILKES, JOHN FISKE, B.A. (<i>Cantab.</i>)	Elmdon Bury, Saffron Walden.
WORLAND, HENRY JOHN	Rushton, Robinhood Road, Brentwood.
WORLEY, FREDERICK HORACE ..	Parr's Bank Buildings, George Lane, Woodford.
YOUNG, CHARLES EDWARD	Stoneygate, Park Avenue, Ilford.
YOUNG, DAVID FERNEE.. ..	2, The Broadway, Barking.

GLOUCESTERSHIRE.

(Somerset, Gloucester, and North Wilts Committee.)

FELLOWS :

*ADDIE, PETER.. .. .	City Valuer's Department, The Exchange, Corn Street, Bristol.
ANDERSON, ROBERT.. .. .	The Barton, Cirencester.
ANSCOMBE, ERNEST	County Buildings, College Court, Gloucester.
*BODY, ARTHUR, A.R.I.B.A.	48, Corn Street, Bristol.
BRUTON, BASIL VASSAR.. .. .	Albion Chambers, King Street, Gloucester.
BRUTON, HENRY WILLIAM	Albion Chambers, Gloucester.
COTTERELL, ALBERT PLAYER	Scottish Buildings, 28, Baldwin Street, Bristol.
ISAAC, M.I.C.E.	
CRISP, GEORGE FREDERICK	County Buildings, Westgate Street, Gloucester.
GOODBODY, FREDERICK ALLEN	
STURGE	33, Corn Street, Bristol.
HARLE, JOHN JOSEPH	Tortworth Estate Office, Falfield.
KNOWLES, HENRY	Egerton House, The Spa, Gloucester.
MITCHELL, HAROLD HASTINGS ..	2, North Parade, Cheltenham.
PETTER, ALBERT EDWARD	Moray Villa, Fishponds, Bristol.
PRITCHARD, HENRY A.	The Royal Agricultural College, Cirencester.
*STURGE, ROBERT FOWLER	33, Corn Street, Bristol.
VILLAR, JAMES.. .. .	2, Essex Place, Cheltenham.
WHEELER, JOHN HENRY WEST ..	Inland Revenue, Shannon Court, Bristol.
WILSON, FREDERICK	City Engineer's Department, 63, Queen Square, Bristol.
WISE, CHARLES DACRES.. .. .	Overbury, Tewkesbury.

PROFESSIONAL ASSOCIATES :

BARBER, HARRY JOHN	7, St. Helena Road, Redland, Bristol.
COOK, THOMAS	District Estate Office, Great Western Railway, Bristol.
DAVIES, FREDERICK WILLIAM ..	60, Manor Road, Bishopston, Bristol.
DAVIS, ARTHUR JAMES	Newton Park Estates Office, Newton St. Loe, Bristol.
DRAKE, FRANCIS JOHN	Brockville House, Albion Street, Gloucester.
FORTUNE, SIDNEY HERBERT ..	Valuer's Department, Shannon Court, Bristol.
HENDERSON, REGINALD ALFRED ..	15, Randall Road, Clifton, Bristol.
HOLBROW, HERBERT OLIVER ..	44, St. Matthew's Road, Cotham, Bristol.
HUTCHINSON, THOMAS JAMES ..	Cecily Hill, Cirencester.
KIESER, WILLIAM HENRY GUSTAV	City Engineer's Office, Bristol.
LANDER, SIDNEY MONTEM	1, Waresley Villas, Old Bath Road, Cheltenham.
LEAH, WILLIAM	3, Moseley Villas, Barnwood, Gloucester.
LEESE, VERNON FRANCIS	Crown Offices, Whitemead Park, Parkend, near Lydney.
MOORE, THOMAS HAROLD	Southend House, Tewkesbury.
OATEN, ALFRED EDWARD	9, Clare Street, Bristol.
PETER, FRANCIS	Ham Villa, Berkeley.
POORE, JOHN	Hunstrete Estate Office, Pensford, Bristol.
PRICE, REGINALD HENRY KING ..	3, Manor Park, Redland, Bristol.
SADLEIR, HAROLD FRANC	Ryton, Dymock.
SCAMMELL, THOMAS EDWARD ..	10, John Street, Bristol.
SIMPSON, FRANCIS ALEXANDER ..	Valuer's Department, Inland Revenue, Shannon Court, Bristol.
STURGE, THEODORE	33, Corn Street, Bristol.
SWANWICK, BRUCE, M.A. (<i>Oxon.</i>) ..	The Thatched House, Coates, Cirencester.
THOMAS, PERCIVAL HARTLAND ..	33, Corn Street, Bristol.
TURNER, DRYSDALE	Royal Agricultural College, Cirencester.
WHEELER, HERBERT HENRY ..	Valuer's Department, County Buildings, College Court, Gloucester.
WHITE, RICHARD STANLEY	Cambridge House, Cambridge, nr. Stonehouse.
WILLIAMS, ERNEST	Eagle House, Brislington, Bristol.
WRIGHT, CHARLES LEE	Inland Revenue, Shannon Court, Bristol.

ASSOCIATE :

KINCH, EDWARD	Royal Agricultural College, Cirencester
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HAMPSHIRE AND ISLE OF WIGHT.

(Hampshire, Dorset, and South Wilts Committee.)

FELLOWS :

*ARNOLD, FRANCIS	Chilland, Winchester, and Hambledon.
AUSTIN, RICHARD	Bishop's Waltham.
BIRCH, FRANCIS JULIAN LAURENCE	Upper Borden, Petersfield.
BIRD, JAMES BINFIELD	Kingswood, Sandown, Isle of Wight.
BLAKE, FREDERICK	46, Commercial Road, Portsmouth.
*BLIZZARD, JOHN HENRY, A.M.I.C.E.	Lansdowne House, Castle Lane, Southampton.
BURNETT, ALFRED ANDREW	2, High St., Southampton, and Shawford.
CABLE, CHARLES VINCENT	The Turret, Hartley Wintney.
COCKS, SAMUEL ROGER	5, St. Thomas's Street, Ryde.
COLYER, FREDERICK, M.I.C.E. ..	Cromwell Lodge, West Street, Ryde, Isle of Wight.
CURTIS, CHARLES EDWARD	Woodlands, Brockenhurst.
ELLEN, FREDERICK CHARLES	The Auction Mart, Andover.
FOX, ERNEST	80, Poole Road, Bournemouth.
FOX, WILLIAM	15, Holdenhurst Road, Bournemouth.
GOLDSMITH, DOUGLAS FLEET	Lavant Street, Petersfield.
GUDGEON, GEORGE EDWARD	Estate Agency Offices, Winchester.
HALL, ERNEST	56, Commercial Road, Portsmouth.
*HARRIS, JAMES	Winchester.
HARTLEY, TOM PERCY	Well Manor, Long Sutton, Winchfield.
HAWKER, HARRY EDWIN	St. Peter's Chambers, Bournemouth.
HERBERT, ALLAN	The Market Place, Andover.
HEWITT, FREDERIC THOMAS BAINES	Royal Engineer Office, Bordon Camp.
HILL, WILLIAM BURROUGH	81, Above Bar, Southampton.
ISTED, SAMUEL EVELAND	6, Merton Road, Southsea.
JENKINS, RICHARD JAMES	Town Hall, Portsmouth.
KAYE, JOHN EDWARD	Tynedale, Porchester Road, Bournemouth.
KENT, GEORGE EDWARD	Normanhurst, Cavendish Road, Southsea.
LANE, ERNEST LACAN	81, Old Christchurch Road, Bournemouth.
*LEMON, SIR JAMES, M.I.C.E., F.R.I.B.A.	Lansdowne House, Castle Lane, Southampton.
LYWOOD, EDWIN	16, Weyhill Road, Andover.
MARTIN, ALFRED JOHN	18, High Street, Alton.
*MARVIN, ALBERT EDWARD	The Grove, Carisbrooke, Isle of Wight.
NEWTON, THOMAS EDWIN	Bank Chambers, Winchester.
NORTH, GEORGE FREDERIC	Strathfield Saye.
OAKLEY, EDWARD BENJAMIN	Hinton Chambers, Bournemouth.
PAIN, JAMES	48, West Street, Fareham.
PATON, DAVID LLEWELLYN	Westminster House, St. Stephen's Road, Bournemouth.

PERKINS, WALTER FRANK, M.P. ..	17, Above Bar, Southampton.
RAYNBIRD, HUGH EDWARD	Basingstoke.
REBBECK, EDWARD WISE	Stafford Lodge, Bournemouth.
REBBECK, THOMAS WARREN ..	Gervis Place, Bournemouth.
*RIDDETT, WILLIAM HAMMOND ..	Townhall Chambers, Ryde, Isle of Wight.
ROBEY, ROBERT	Oaklands, East Tytherley, Romsey.
ROBINSON, EDMUND ARTHUR ..	Lee-on-the-Solent, Gosport.
SANDERS, INGALTON	23, Portland Street, Southampton.
SAUNDERS, THEODORE RIDLEY, A.M.I.C.E.	Belgrave Chambers, Ventnor, Isle of Wight.
SAWYER, JOHN ASHTON.. .. .	59, High Street, Winchester.
*SIMMONS, CHARLES FRANKLIN ..	Basingstoke.
SIMMONS, W. ANKER	Basingstoke.
*SMITH, FREDERICK JOHN	21, Portland Street, Southampton.
SMITH, GEORGE ALFRED.. .. .	78, Parchment Street, Winchester.
STALLARD, ALFRED EDWIN	West Street, Havant.
STOPHER, THOMAS	Winchester.
THIRLAWAY, ROBERT	Arrocha, Mousehole Lane, Shirley, South- ampton.
VERNON-INKPEN, GEORGE CHARLES	40, Commercial Road, Portsmouth.
WALMSLEY, JOSEPH WILLIAM, F.R.I.B.A.	7, King's Terrace, Southsea.
WALTER, THOMAS JAMES	Gervis Place, Bournemouth.
WARNER, HENRY	Farringdon, Alton.
WAY, HENRY JAMES	109, Lower St. James's Street, Newport, Isle of Wight.
WESTBURY, GEORGE HENRY ..	The Knoll, Andover.
WETHERALL, HARRY LANCASTER..	Bracklyn, Winchfield.
WOOLLEY, JOHN TURTON	Spursholt, Romsey.
WYATT, ARCHIBALD	East Lodge, Fareham.

PROFESSIONAL ASSOCIATES :

ABBOTT, ALEXANDER HENRY ..	2, Boscombe Chambers, Boscombe, Bournemouth.
ARNOLD, ALAN.. .. .	Westgate Chambers, Winchester.
AYLWARD, GEORGE THOMAS	Oxford Lodge, Nutley, Basingstoke.
BAKER, HENRY GEORGE.. .. .	20, Lansdowne Road, Aldershot.
BALCOMB, CECIL AUGUSTUS	278, Christchurch Road, Bournemouth.
BALDWIN-WISEMAN, WILLIAM RALPH, M.SC., F.G.S., A.M.I.C.E. ..	24, Winchester Road, Southampton.
BALL, FRANCIS LEOPOLD	Whittington Chambers, King's Road, Southsea.
BLAKE, ALFRED NORMAN	The White Cottage, Gosport.
BLAKE, REGINALD LAPHORNE..	46, Commercial Road, Portsmouth.
BLORE, CHARLES GORDON	Idsworth Estate Office, Horndean.
BRIDGER, ARTHUR EDWARD ..	Greywell, Winchfield.
BRUCE, ALEXANDER DAVID	Elvetham Estate Office, Winchfield.

BURBIDGE, FREDERICK CHARLES ..	75, Victoria Road North, Southsea.
CHAMBERLAIN, HARRY SAMUEL ..	91, St. Andrew's Road, Southsea.
COX, ARTHUR STANLEY	30, Porchester Road, Bournemouth.
CULME-SEYMOUR, ARTHUR GRANVILLE	Glenville, Bitterne.
DANCASTER, ARTHUR	Goodwin, Richmond Park, Bournemouth.
DONGER, WILLIAM JAMES	16, St. Cross Road, Winchester.
DOUGLAS, BERNARD MOXON ..	14, Festing Grove, E. Southsea.
ELLEN, FREDERICK CHARLES GROOME	Eastfield House, Andover.
EVANS, CHARLES STOKES EATON ..	Delmé-Radcliffe Estate Office, Titchfield.
EVERED, GILLIEBRAND ELWIN ..	117, Old Christchurch Road, Bournemouth.
FIELD, LEONARD MARTIN	20, Linden Grove, Gosport.
GIBBINGS, THOMAS STANLEY ..	Warsash, near Southampton.
HAGGER, ALBERT JAMES	12, Vale Road, Bournemouth.
HANKINSON, FRANCIS HENRY ..	Richmond Chambers, Bournemouth.
HARGREAVES, LEOPOLD REGINALD, B.A.	Cuffnells, Lyndhurst.
HARMER, ERNEST FREDERICK ..	Messrs. Weston and Burnett, 24, Portland Street, Southampton.
HARTFREE, GEORGE BERTRAM ..	District Council Office, Alton.
HARVEY, FREDERICK CHARLES ..	1, Frithknowle Villas, Brockhurst Road, Gosport.
HAYWARD, JOSEPH	Branksome, Chandler's Ford.
HOUGHTON, WILLIAM CHARLES ..	The Coburg, Upper Terrace Road, Bournemouth.
INSLEY, GEORGE PITRON	Tremont House, Charminster Road, Bournemouth.
KNAPMAN, HARRY LETHBRIDGE ..	50, Newcombe Road, Polygon, Southampton.
LAMBERT, GEORGE ARROW	The Castle, Winchester.
LUNNISS, SYDNEY FREDERICK ..	Liphook.
MARTIN, FREDERICK MARK	Edenhurst, Tower Street, Winchester.
MASTERS, WILLIAM HENRY	Glencairn, Arthur Road, Southampton.
MILLAR, PETER	Borough Engineer's Office, Southampton.
MURRAY, ARTHUR MALCOLM	67, Irving Road, Bournemouth.
MURTOUGH, JOSEPH	56, Stubbington Avenue, North End, Portsmouth.
NORTH, HUGH FREDERIC	Strathfield Saye.
OUVRY, PETER ARNOLD	The Salterns, Lymington.
PURSEY, CHARLES	High Park, Ryde, Isle of Wight.
RIDDETT, MAURICE CHARLES ..	Town Hall Chambers, Ryde, Isle of Wight.
ROBERTS, ARTHUR ATHERTON ..	1, Lombard Flats, Ashley Road, Boscombe.
RUMSBY, WALTER SAMUEL	Winchester House, Fir Vale Road, Bournemouth.

SIMMONS, FRANK WORTLEY	Eastrop Fields, Basingstoke.
SMITH, HERBERT FREDERICK GEORGE	21, Portland Street, Southampton.
SNOOK, HOWARD VIRTUE	10, Madeline Road, Petersfield.
STEDHAM, PERCY NORMAN	91, West Street, Fareham.
SUTTON, CECIL N. STAFFORD ..	Estate Office, Brockenhurst.
TALBOT-PONSONBY, ARTHUR HUGH BRABAZON	Langrish House, Petersfield.
THOMAS, ERNEST JAMES	120, High Street, Gosport.
WALLER, BERTRAM HANNEN ..	17, Above Bar, Southampton.
WARNER, BLAIR MARTIN	Harfields, Fareham.
WHESKER, JOHN EDWARD	36, Sussex Street, Winchester.
WHITE, ARTHUR VIVIAN	9A, Cranbury Place, Southampton.

ASSOCIATE :

DOWNIE, ALEX. FRANCIS MACKENZIE | Alton.

HEREFORDSHIRE.

(Salop, Hereford, and Mid-Wales Committee.)

FELLOWS :

HAYWOOD, WILLIAM MATTHEWS ..	9, West Street, Hereford.
HUNT, GEORGE WHITAKER	Estate Office, Holme Lacy.
LLEWELLYN, ARTHUR HENRY ..	Valuer's Office, 3, Offa Street, Hereford.
MILLYARD, JOHN WILLIAM	Estate Office, Saltmarshe Castle, Brom- yard.
PARKER, JOHN, A.M.I.C.E.	Mansion House, Hereford.
STOOKE, JOHN EDWIN HELLYAR	2, Palace Yard, Hereford.

PROFESSIONAL ASSOCIATES :

ASHTON, ARTHUR	Messrs. Small and Ashton, Ross.
GURNEY, RONALD GEORGE	Ledbury R.D.C., Ledbury.
STEEL, ALEXANDER McKEAND ..	8 and 9, Newmarket Street, Hereford.

HERTFORDSHIRE.

(Bedford, Essex, Hertford and Middlesex Committee.)

FELLOWS :

BROWN, FRANK JOHN	Tring.
BURNETT, GEORGE JOHN MUL- CASTER, M.A. (<i>Cantab.</i>)	Elstree Cottage, Elstree.
BURR, HARRY	Estate Office, Letchworth, near Hitchin.
CHILD, FRED	1, Station Road, New Barnet.
COUCHMAN, HENRY BOTELER ..	Moor Park Estate Office, Rickmansworth.
CRAWTER, JOHN	Cheshunt.
CRIER, JOHN THOMAS	District Valuer's Office, St. Albans.
CROZIER, HARRY WILLIAM	Bengeo, Hertford.
DEBENHAM, FRANK GISSING ..	Cheshunt Park.
DUVALL, JOHN.. .. .	The Grange, Ware.
FAIRCHILD, EDWARD JAMES.. ..	Wenlock House, Laurel Road, St. Albans.
GOODING, WILLIAM ALFRED ..	Arndilly, York Road, St. Albans.
HADDOCK, ROLAND	21, Verulam Road, Hitchin.
HASLUCK, LANCELOT GERALD ..	Green Hill Park, New Barnet.
HUNT, THOMAS.. .. .	Baldock Street, Ware.
INGRAM, CECIL WALTER.. .. .	Messrs. W. Brown and Co., Tring.
LAWRENCE, JOHN, N.D.A.	Messrs. Crawter, Cheshunt.
LOW, ROBERT JOHN	St. Albans.
MACDONALD, ARTHUR, M.A. (<i>Cantab.</i>)	Tring.
MORRISON, IVOR CHARLES	Alma, St. Albans.
PECK, WILLIAM ROLAND	Whitehayes, Chorley Wood.
PYLE, BENJAMIN THOMAS RICE ..	Hoskins, Sawbridgeworth.
RUMBALL, AUBREY.. .. .	St. Albans.
SLY, JOSEPH TOWNSON	Estate Agency Offices, Rickmansworth.
THURNALL, JOHN EDWARD	Royston.
*WEALL, JOHN.. .. .	38, High Street, Watford.
WEALL, JOHN GRAHAM	38, High Street, Watford.
WOODMAN, THOMAS FOSTER ..	32, St. Peter Street, St. Albans.
YORK, HENRY	East Barnet Valley Urban District Council, Station Road, New Barnet.

PROFESSIONAL ASSOCIATES :

ABBOTT, ARTHUR JOE	Lansdowne Villa, Bulwer Road, New Barnet.
ALLEN, HAROLD COLIN	Tudor House, Alma Road, St. Albans.
BEAVEN, HOWARD CLIFFORD ..	2, Church Passage, High Street, High Barnet.
BROWN, WILLIAM EDWARD	Langla, Rosslyn Road, Watford.

CATON, EDMUND PERCY.. ..	Estate Office, Letchworth.
COCKS, JOHN FREDERICK	Hertford.
COLE, CHARLES PHILIPS.. ..	Fir Villa, Western Road, Tring.
EAMER, ALFRED STANLEY	27, Station Road, Watford.
EAMES, HENRY PARSLOE.. ..	18, High Street, Barnet.
FINCH, CLEMENT ROBERT	Towerfield, Clarendon Road, Watford.
FLINT, WILLIAM FIELDER	Eastnor, Avenue Rise, Bushey.
GETTINGS, SYDNEY SALTER, A.M.I.C.E.	Resident Engineer's Office, Sewerage Works, Tring.
GIBSON, ALAN KEITH	Balls Park Estate Office, Jeningsbury, Hertford.
GIFFIN, CHARLES WILLIAMS	Stotfold, Baldock, S.O.
GRACE, EDWARD NATHANIEL	Kendalls Building Estate Office, Radlett.
GUDE, CHARLES, JUN.	Messrs. Crawter, Cheshunt.
HAYLLAR, SIDNEY HAYLLAR	Stevenage.
HINE, STANLEY GORDON	Newnham, Harpenden.
HOLLINS, SAM	26, Denmark Street, Watford.
JOHNSON, FREDERICK JOHN	70, Tamworth Road, Hertford.
KENT, PHILIP, JUN.	19, Leys Avenue, Letchworth.
KING, WILLIAM ISAAC	The Elms, Rickmansworth.
LINDSELL, PHILIP JANSON	Bearton, Hitchin.
LOCK, CECIL WILLIAM BEST	9, Station Road, Watford.
MARKHAM, CHRISTOPHER WILLIAM O'LEARY	Narborough, Albert Road, Watford.
NEWMAN, WILLIAM WALTER, A.M.I.C.E.	Council Offices, High Street, Watford.
PAGE, HERBERT	Messrs. Harland and Son, Barnet.
PATEY, GEORGE HEAD	3 and 5, Station Road, Watford.
RAYMOND, JAMES OWEN	Western Road, Tring.
ROWLEY, WILLIAM TAYLOR	Royston.
RYLAND, LORENCE	Treherne, Chalk Hill, Bushey.
SALWEY, ARTHUR	The Cedars, Broxbourne.
SEDGWICK, RUPERT WILLIAM	38, High Street, Watford.
SMITH, CUTHBERT	The Crossways, Totteridge.
SMITH, HARRY VINCENT.. ..	5, Shaftesbury Avenue, New Barnet.
VINCE, FREDERIC HAROLD	54, Cassio Road, Watford.
WADSWORTH, JAMES MOFFATT	7, Crabtree Lane, Harpenden.
WALLER, WATHEN ARTHUR	The Old Vicarage, Bushey Heath.
YORK, WILLIAM HENRY.. ..	Clarendon, Station Road, New Barnet.
YOUNG, WILLIAM	4, St. Peter's Street, St. Albans.

ASSOCIATE :

GAYTON, CHARLES | Much Hadham, near Ware.

HUNTINGDONSHIRE.

(Cambridge, Huntingdon, Norfolk, and Suffolk Committee.)

FELLOWS :

*LOOKER, JOHN .. .. .	..	| The Terrace, Huntingdon.
*THEAKSTON, WILLIAM PEASE ..	..	Huntingdon.

PROFESSIONAL ASSOCIATE :

PEPPERCORN, JOHN ARTHUR	Eaton Socon, St. Neots.
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KENT.

(Kent Committee.)

FELLOWS :

AMOS, FRANK	..	3, The Parade, Canterbury.
ASHENDEN, LEONARD THOMAS ..	..	The Kent Fire Office, 29, Westgate, Canterbury.
BARTON, HARRY HOWELL .. ..	..	| 57, Sandgate Road, Folkestone.
BAXENDALE, FREDERICK GIESEN ..	..	| 2, Hawes Road, Bromley.
BEARD, EDWIN THOMAS, M.I.C.E. ..	..	| Hill House, Walmer.
BILLINGHAM, JOHN ALFRED LAWRENCE, CAPTAIN		| Royal Engineer Office, Western Heights, Dover.
BLACKBOURN, HENRY .. .. .	..	| 8, Claremont Road, Tunbridge Wells.
BRACKETT, ARTHUR WILLIAM .. ..	..	| 27, High Street, Tunbridge Wells.
BRACKETT, FREDERICK HENRY .. ..	..	| 27, High Street, Tunbridge Wells.
BRACKETT, WILLIAM .. .. .	..	| 27, High Street, Tunbridge Wells.
BURNS, GAVIN JAMES, B.SC. (<i>Lond.</i>)		| Building Works Department, Royal Arsenal, Woolwich.
BURROWS, ALFRED JOHN .. .. .	..	| 41, Bank Street, Ashford.
CHAMPION, PHILIP .. .. .	..	| The Downs, Darenth, Dartford.
CHATELL, FRANCIS LORiot .. .. .	..	| Lower Camden, Chislehurst.
CHEW, HENRY VICTOR .. .. .	..	| Prospect House, Tom Throws, Hawkhurst.
CLARK, HUDSON OWEN .. .. .	..	| 73, Maison Dieu Road, Dover.
COBB, HENRY FREDERICK .. .. .	..	| Higham.
*COBB, HERBERT MANSFIELD .. ..	..	| Higham.
COBB, ROBERT .. .. .	..	| Borstal Lodge, Rochester.
COLES, JAMES HATCH .. .. .	..	| Valuer's Department, 392, High Street, Rochester.
COOPER, GEORGE AUGUSTUS .. ..	..	| 24, Stone Street, Maidstone.
COWPER, WILLIAM SHAPLAND .. ..	..	| 81, High Street, Sittingbourne.

COX, WALTER THEODORE	Holmbury, Bower Mount Road, Maidstone.
CRONK, CHARLES TYLEE.. ..	Sevenoaks.
CRONK, EDWYN EVANS	Sevenoaks.
CRONK, FRANK.. ..	Sevenoaks.
CRONK, WILLIAM HENRY	Sevenoaks.
DANN, HENRY.. ..	Dartford.
DANN, HENRY, JUN.	3, Spital Street, Dartford.
DAY, WILLIAM.. ..	High Street, Maidstone.
DUNSTALL, HERBERT HENRY, A.R.I.B.A.	Bank Chambers, Railway Street, Chatham.
ELGAR, J. EDWARD.. ..	Crockshard, Wingham.
EWING, GUY BEAUMONT.. ..	Cole Allen, Edenbridge.
FARNHAM, WILLIAM AUGUSTUS ..	The Council Offices, Foots Cray U.D.C., Sidcup.
FINN, FRED.	Queen Street, Deal.
FREEMAN, SYDNEY.. ..	Tunbridge Wells.
GOADBY, FRANCIS HUBERT, A.M.I.C.E.	Works Dept., H.M. Dockyard, Chatham.
GOODCHILD, WALTER CHARLES ..	29, Crookston Road, Eltham.
GROVER, PHILIP GORDON	Eastbrook Lodge, Lyminge, S.O.
HALE, HARRY BARNES	Gresham Lodge, Sidcup.
HARVEY, JOHN JAMES SAYER ..	80, Castle Street, Canterbury.
HAYWARD, FREDERICK GEORGE ..	Market Square, Dover.
*HAYWARD, HENRY.. ..	Dover.
HINDS, HENRY.. ..	57, Queen Street, Ramsgate.
HOBBS, JOHN	Estate Office, Ashford.
HOGWOOD, DOUGLAS CLARENCE ..	6, Queen Street, Ramsgate.
HOMAN, FRANKLIN GEORGE	184, Eastgate, Rochester.
HOMAN, HUBERT FRANKLIN	184, Eastgate, Rochester.
HONEYBALL, FRED. THOMAS	Deal.
HOOPER, CECIL HENRY	South-Eastern Agricultural College, Wye.
JACKSON, WILLIAM TRESS	117, High Street, Sittingbourne.
JENNINGS, WILLIAM JOSEPH	4, St. Margaret's Street, Canterbury.
KIDWELL, JOHN	St. Margaret's Bank, Rochester.
KINGSFORD, PERCY HAMILTON ..	24, High Street, Canterbury.
*LANGRIDGE, GEORGE	Tunbridge Wells.
LANGRIDGE, WALTER FREDERICK..	Tunbridge Wells.
LATTER, HUGH ROBINSON	The Town Hall, Bromley.
LEPPER, JOHN HARRAGE.. ..	10, Market Square, Bromley.
LOVEGROVE, HENRY, A.R.I.B.A. ..	18, Foxgrove Road, Beckenham.
LUCAS, WILLIAM EDWARD	Bexley.
MANN, JABEZ, A.M.I.C.E.	Sevenoaks.
MOODY, HERBERT JOHN.. ..	10, Qusted Villas, Surrenden Road, Folkestone.
NEAME, FREDERICK.. ..	Macknade, Faversham.
PAGE, STANLEY HATCH	6, Queen Street, Ramsgate.

PARRIS, CHARLES JOHN	67, High Street, Tunbridge Wells.
PAYNE, FREDERICK.. ..	10, Market Square, Bromley.
PRALL, HERBERT ALEXANDER ..	150, Eastgate, Rochester, and Martin's Bank Chambers, Dartford.
REEVE, KINGSNORTH	High Street, Lydd.
SCRIVEN, CHARLES HERBERT ..	Agency Office, Thong, Gravesend.
SMITH, GEORGE.. ..	Boughton Monchelsea.
SNELLING, HENRY	Sidcup.
STANTON, FREDERICK WILLIAM SCHULTHEISS, A.M.I.C.E.	10, The Paddock, Chatham.
STONEHAM, EDWARD RUSSELL ..	Orchard House, Erith.
TEMPLE, FREDERICK WILSON ..	57, Sandgate Road, Folkestone.
THORNTON, ARTHUR BRUCE	18, Holwood Road, Bromley.
TITFORD, HORACE JAMES	Messrs. Waterer and Dickins, 138, High Street, Bromley.
TOMPSETT, WILLIAM ROBERT ..	Meadhurst, Tonbridge, and Stone Castle Farm, Paddock Wood.
TURNER, BENJAMIN GEORGE.. ..	Church House, Walmer.
VINTEN, HAROLD BERTRAM	72, High Street, Ramsgate.
WACHER, THOMAS	Upper Bridge Street, Canterbury.
WACHER, THOMAS BLAKE	2, Upper Bridge Street, Canterbury.
WALMISLEY, ARTHUR THOMAS, M.I.C.E.	Harbour Board Offices, Dover.
WARING, HERBERT FULLER	6, Earl Street, Maidstone.
WATERMAN, BERTIE EDWARD ..	18, Tower Road, Dartford.
WATERMAN, JAMES	Tenterden and Ashford.

PROFESSIONAL ASSOCIATES :

ALLFREY, HUGH LIONEL.. ..	Old Place, Sandhurst, Hawkhurst.
ANNETT, ERNEST TAYLOR	Borough Surveyor's Office, Gillingham.
BLOMFIELD, CHARLES GEOFFREY..	Stoneycroft, 2, Glentramnon Park, Orpington.
BOND, GERALD EDWARD	Messrs. Cobb, Higham, Rochester.
BROMLEY, ROBERT CECIL	Homeleigh, Longlands Road, Sidcup.
BROOKER, FREDERICK GEORGE ..	Elm Bank, Sevenoaks.
BROWN, ALEXANDER	Home Farm, Hothfield, Ashford.
BROWN, GEORGE MACDONALD ..	Waldershare Estate Office, Dover.
BURROWS, FRANK HERBERT ..	41, Bank Street, Ashford.
BURTENSHAW, ARTHUR HOWARD..	Valuer's Office, 24, Stone Street, Maid- stone.
BUSS, HAROLD GEORGE.. ..	10, The Esplanade, Dover.
CHAMPION, GEORGE ERNEST ..	Redwall Farm, Linton.
CHAPMAN, VAUGHAN GODFREY ST. JOHN	112, Beckenham Road, Beckenham.
COLLINS, ISAAC.. ..	The Hectorage, Tonbridge.
COWELL, NORMAN.. ..	District Valuer's Office, 18, Holwood Road, Bromley.

COWPER, RICHARD WILLIAM ..	81, High Street, Sittingbourne.
CREASEY, JOHN ROGERS, JUN. ..	Beltolt, Hadlow Road, Sidcup.
CROSSLEY, THOMAS EDGAR	68, Tweedy Road, Bromley.
DAVEY, JOHN	129, Church Lane, Old Charlton.
DREW, STANLEY T.	Mayfield, Grove Park.
DUCK, GEORGE FRANCIS.. ..	Keston, Hayes.
EDWARDS, JOHN PERCIVAL	Glenvale, Cromwell Road, Beckenham.
ELGAR, CHARLES JOHN	Crockshard, Wingham, near Dover.
ELGAR, WALTER ROBINSON	Hillside, Sittingbourne.
FELTHAM, ARTHUR WILLIAM ..	Clovely, Upper Fant Road, Maidstone.
FREEMAN, DUDLEY SEARLE.. ..	Waterlake, Chiddingstone.
GRAY, JOHN VINCENT	10, Brent Road, Shooter's Hill, Woolwich.
GRAY, WILLIAM EDWARD	4, St. Margaret Street, Canterbury.
GREEN, THOMAS JOHN	13, King Street, Maidstone.
HAINES, ALFRED HUBERT JESTON	The Agricultural College, Wye.
HAYWARD, ARTHUR LATEWOOD ..	16, Lew Road, Rochester.
HENDERSON, JOHN ALEXANDER ..	Casslands, Woodfield Road, Tonbridge.
HONEY, ROBERT LLEWELLYN ..	Assistant Borough Surveyor, Chatham.
HOOKEY, REGINALD EDWARD ..	18, Holwood Road, Bromley.
HUGHES, JOHN HENRY	Glengowan, Shortlands.
JACKSON, RICHARD STEPHENS ..	24, Stone Street, Maidstone.
JARRETT, THOMAS WILLIAM .. .	124, East Street, Sittingbourne.
JULL, ROBERT CHARLES.. . .	1, Cumberland Gardens, Tunbridge Wells.
KELLEWAY, HERBERT DAVIES ..	61, Tweedy Road, Bromley.
KENNARD, HORACE BURDOCK ..	St. Margaret's, New Eltham.
KINDELL, FRANCIS PERCY .. .	Surveyor's Department, Urban District Council, Beckenham.
KNIGHTON, THOMAS SPENCER ..	Nevill Lodge, Tunbridge Wells.
LAMBERT, EDWIN HANS.. . .	Sunbury, Matfield.
LEE, LESLIE HERBERT	22, High Street, Ashford.
MCDUGALL, DOUGLAS ROBERT ..	138, High Street, Bromley.
MILES, LEONARD PERCY.. . .	Netherfield, Scott's Lane, Shortlands.
NAYLOR, JOHN STUART	Edenthorpe, Beckenham.
NEAME, FREDERICK IVO.. . .	The Offices, Macknade, Faversham.
NEW, ELLIOTT JOHN	c/o E. D. Till, The Priory, Eynsford.
NEWBERY, WALTER SAMUEL.. .	68, Grove Hill Road, Tunbridge Wells.
NEWNHAM, FRANK GEORGE .. .	Hillside, Orpington.
PACKE, WILLIAM VERE	West Wickham, Kent.
PARKINSON, HERBERT	392, High Street, Rochester.
PAWLEY, TOM EDMUND.. . .	24, Stone Street, Maidstone.
PAYNE, JOHN OSWALD	Mill House, Keston, Hayes.
PHILPOT, CLIFFORD NEEDHAM ..	Crockham Hill, Edenbridge.
PIERCE, EDWARD LEMUEL .. .	Bickley.
RANDALL, ERNEST SMITH .. .	Elm House, New Road, Chatham.
RANDALL, WILLIAM EDWARD ..	
RENWELL, JUN.	171, High Street, Chatham.

RUSH, ARTHUR LESLIE	65, High Street, Tunbridge Wells.
SCARLETT, JOHN WALTER, JUN. ..	Beechcroft, Newington, Ramsgate.
SEARING, GEORGE THOMAS	4, Carrington Road, Dartford.
SMITH, CHARLES PHILIP.. .. .	Town Hall, Greenwich.
SMITH, ERNEST EDWARD	37, Shepherd's Lane, Dartford.
SMITH, HAROLD SANKEY.. .. .	Lyewood, Boughton Monchelsea, Maidstone.
SMITH, HUBERT GEORGE.. .. .	Boughton Monchelsea, Maidstone.
SMITH, HUGH	Auction, Land and Estate Office, St. Peter's Road, Broadstairs.
STRUDWICK, FRANK EDWARD ..	32, Park Road, Bromley.
STRUDWICK, PHILIP.. .. .	32, Park Road, Bromley.
STURGESS, JOHN MOORE.. .. .	Penshurst Park, near Tonbridge.
SYMES, EDWARD DOUGLAS	9, Calverley Park Gardens, Tunbridge Wells.
TOMLIN, WILLIAM, JUN.	Hollydene, Birchington.
WEEKS, PERCY BERTRAM	Vale Towers, Tunbridge Wells.
WESTBROOK, BERNARD ANSON ..	54, Dudley Road, Tunbridge Wells.
WESTBROOK, CHARLES EDWARD ..	Bank Buildings, Tunbridge Wells.
WHITE, HERBERT PRATT.. .. .	4, Calverley Terrace, Tunbridge Wells.
WHITE, JOHN WILLIAM EDDEN ..	High Street, Edenbridge.
WILKS, ERNEST STRINGER	Douglas Avenue, Hythe.
WINTON, DOUGLAS GEORGE	Etherton Hill, Speldhurst, Tunbridge Wells.
WRIGHT, ERNEST HARRY	6, Thomas Street, Woolwich.

LANCASHIRE.

(Lancashire and Cheshire Committee.)

FELLOWS :

BANCROFT, FREDK. HERBERT ..	78, King Street, Manchester.
BATEY, HENRY SIMPSON.. .. .	51, King Street, Manchester.
BECKWITH, HENRY LANGTON	3, Cook Street, Liverpool.
BERRY, CHARLES WINDSOR	51, North John Street, Liverpool.
BIRCH, WALTER DE HOGHTON ..	Hoghton Estate Office, Walton Hall Preston.
BLUNT, FRANCIS EDWARD	Valuation Department, Inland Revenue 12, St. John's Lane, Liverpool.
BRADY, RALPH HOLLINSHED	42, John Dalton Street, Manchester.
BRIDGFORD, ERNEST JAMES	65, King Street, Manchester.
BRIERLEY, HUGH COLLEY	City Surveyor's Office, Town Hall, Manchester.
BRIGGS, ARTHUR	9, Albert Square, Manchester.
BROCKLEBANK, JOHN	58A, Yorkshire Street, Rochdale.
BURY, JOSHUA.. .. .	8, John Dalton Street, Manchester.
CAMPBELL, HENRY HUNTER	11, Old Hall Street, Liverpool.
CARTWRIGHT, JOSHUA, M.I.C.E. ..	21, Parson's Lane, Bury.

CLARE, EDWARD LOVELL	18, Water Street, Liverpool.
DOOPE, SAMUEL	65, Bolton Road, Farnworth.
DROPPER, RICHARD BLAYLOCK	12, St. John's Lane, Liverpool.
CROSS, WILLIAM HASLAM	77, King Street, Manchester.
DRUMMOND, BERTRAM	54, Alfred Terrace, Fleetwood.
DUNLOP, DUGDALE OAKELEY	57, King Street, Manchester.
EARLE, JOHN WILFRID	88, King Street, Manchester.
EARLE, THOMAS ALGERNON	90, King Street, Manchester.
ELLIS, FRANCIS	Earl of Derby's Estate Office, Bury.
FAIR, ARTHUR EDWARD	Estate Office, Haigh Hall, Wigan.
FAIR, JAMES STRETTON	Estate Offices, Lytham.
FAIRCLOUGH, WILLIAM	Leigh, and 60, King Street, Manchester.
FLETCHER, THOMAS	46, Fisher Gate, Preston.
FOWLER, ALFRED MOUNTAIN, M.I.C.E.	1, St. Peter's Square, Manchester.
GILRUTH, WILLIAM	H.M. Office of Works, Victoria Street, Liverpool.
GREGSON, GEORGE ERNEST	11, Chapel Street, Preston.
HALL, JOHN HERBERT	1, Cooper Street, Manchester.
HARTLEY, HENRY	Bristowe Chambers, 8, Harrington Street, Liverpool.
HOPKINSON, ALFRED, A.M.I.C.E.	15, Agur Street, Bury.
MURRELL, JOHN WEYMOUTH	25, Brazennose Street, Manchester.
MUTCHINS, JAMES BUSHELL	22, Lord Street, Liverpool.
NACKSON, ROBERT	Estate Office, Wrightington, near Wigan.
NELLY, SYDNEY APPLETON	9, Wembley Gardens, Aintree, Liverpool.
NIRBY, EDMUND, F.R.I.B.A.	5, Cook Street, Liverpool.
NIRBY, FRANCIS JOSEPH	5, Cook Street, Liverpool.
NOWLES, LESLIE S.	47, Portman Street, Moss Side, Manchester.
NANCASTER, CHAS. HOLLAND	Union Offices, Brougham Terrace, West Derby Road, Liverpool.
NARMUTH, GEORGE HORATIO	Wilton Chambers, 10, St. Ann's Square, Manchester.
NOMAS, ALBERT DANIEL	Estate Department, Lancashire and Yorkshire Railway, Manchester.
NARSDEN, JOHN WILLIAM	Inland Revenue, 78, King Street, Manchester.
NAXWELL, FRANCIS WILLIAM	25, Brazennose Street, Manchester.
NKADE, THOMAS DE COURCY, M.I.C.E.	The Town Hall, Manchester.
NUTTALL, HERBERT	33, Winckley Square, Preston.
NLDHAM, JAMES	12, Booth Street, Piccadilly, Manchester.
NAIN, COARD SQUAREY	51, North John Street, Liverpool.
NARK, PHILIP	The Park Hotel, Preston.
NREA, JOHN MARCUS BEAUMONT	8, Winckley Street, Preston, and Lytham.
NIMMER, JOHN STANISLAUS	48, Castle Street, Liverpool.
NOBERTS, SAMUEL	Royal Engineer Office, 14, Elliot Street, Liverpool.

ROBINSON, GEORGE EDWARD ..	7, Tackett's Street, Blackburn.
SECKER, JOHN EUSTACE.. ..	Estate Office, Warrington.
SHELMERDINE, HENRY	Estate Offices, Lancashire and Yorkshire Railway, Hunt's Bank, Manchester.
SMITH, JOHN AMBROSE	34, John Dalton Street, Manchester.
SMITH, JOHN THOMPSON.. ..	34, John Dalton Street, Manchester.
TAYLOR, EDWIN THURLOW	Valuer's Department, Market Square, Lancaster.
TAYLOR, THOMAS WALTERS	25, Brazennose Street, Manchester.
THOMAS, GLEGGE	Cheshire Lines Committee, Central Sta- tion, Liverpool.
THOMPSON, FRANCIS WILLIAM ..	Ash Lawn, Heaton, Bolton.
TURTON, FLETCHER THOMAS	Municipal Offices, Surveyor's Depart- ment, Liverpool.
*WAINWRIGHT, THOMAS TAYLOR	13, Union Court, Castle Street, Liverpool.
WALKER, HOWARD JAMES	Inland Revenue, Bank Chambers, Wigan.
*WALLIS, JOHN DAVID	57, King Street, Manchester.
WATTS, SAMUEL LINGARD	40, South King Street, Cross Street Manchester.
WILSON, LAWRENCE RICHARD ..	Bank of England Chambers, Tib Lane Manchester.
*WILSON, THOMAS SILK.. ..	Bank of England Chambers, Tib Lane Manchester.
WILSON, WILLIAM EDWARD ..	Bank of England Chambers, Tib Lane Manchester.
WILSON, WILLIAM HENRY	5, New Brown Street, Manchester.
WORRALL, ERNEST.. ..	Stretford Council Offices, Old Trafford.
WRENNALL, WILLIAM	9, Harrington Street, Liverpool.
YOUNG, HERBERT OSWALD	12, St. John's Lane, Liverpool.
YOUNG, OSWALD WILLIAM	Mersey Docks & Harbour Board, Liverpool.

PROFESSIONAL ASSOCIATES :

AGATE, HARRY BERTRAND	Fernfield, Ellesmere Park, Eccles.
APPLEBY, FRANK SEFTON	6, Lord Street, Liverpool.
ATAK, GEORGE ALBERT SEVERNE	Union Offices, Preston.
BARRETT, THOMAS NORMAN ..	Beech Mount, Ellesmere Park, Eccles.
BENSON, RALPH FRANCIS	2, Stanley Terrace, Preston.
BOLTON, FRANK HOLMES	78, King Street, Manchester.
BOOTH, ERNEST WITTON, A.M.I.C.E.	29, Granville Road, Fallowfield, Man- chester.
BOWDEN, ERNEST NEWTON	14, Ridgefield, Manchester.
BOWTELL, WILLIAM EDGAR	Valuer's Department, Inland Revenue 78, King Street, Manchester.
BRADSHAW, HENRY HERBERT ..	63, Prospect Terrace, Altham, Accrington.
BRETTELL, CHARLES BANDON ..	2, Sylvan Grove, Chorlton-on-Medlock Manchester.
BRIDGFORD, LEO APPLETON	65, King Street, Manchester.

BURGESS, ARTHUR	31, Parkfield Road, Sefton Park, Liverpool.
BURTON, GEORGE FREDERICK ..	11, Manor Road, Low Side, Oldham.
CARR, ARTHUR BENTLEY.. ..	14, Cook Street, Liverpool.
CHANT, ARTHUR GUY	Lindow Lodge, Lancaster.
CHARLES, JOHN ACHESON	191, Abbey Road, Barrow-in-Furness.
CLOUGH, HERBERT HEALEY	25, Fenton Street, Rochdale.
COLLYER, DANIEL WILLIAM	34, Miller Arcade, Preston.
CONWAY, FREDERICK JAMES KELSHAW	12 St. John's Lane, Liverpool.
CORNWELL, WILLIAM JAMES ..	209, Duke Street, Barrow-in-Furness.
COTTAM, HARRY	Engineer's Office, Fylde Water Board, Barnacre, near Garstang.
CULE, EDWARD IVOR	Aughton Chambers, 7, Moorfields, Liverpool.
DAVIDSON, RICHARD BRUCE	10, Hardshaw Street, St. Helens.
DAWSON, HENRY WALKER	19, Queen Street, Oldham.
DICKSON, ALFRED ERIC.. .. .	30, Winckley Square, Preston.
DIXON, FRANCIS EDWARD, A.M.I.C.E.	9, Bushell Place, Preston.
DIXON, ISAAC	End House, Garmoyle Road, Liverpool.
DIXON, MYLES.. .. .	Municipal Offices, Liverpool.
ECCLESHALL, GEORGE BENNETT ..	34, Bradford Terrace, Worsley Road, Farnworth.
ESCOLME, JOHN	Moss House, Morecambe.
FOSTER, WILLIAM ARTHUR	Valuer's Department, Richmond Chambers, Blackburn.
GAWITH, HARRISON.. .. .	12, St. John's Lane, Liverpool.
HARRISON, ERNEST.. .. .	Hill Top, Bolton-le-Sands, near Carnforth.
HARRISON, MICHAEL MATTINSON..	Elms Farm, Whitefield, nr. Manchester.
HEATON, HERBERT	Surveyor's Department, Town Hall, Manchester.
HEPWORTH, ERNEST ALFRED ..	75, Princess Street, Manchester.
HEYWOOD, REGINALD	8, Eldon Street, Preston.
HODGKINSON, JAMES HENRY	23, Delamere Street, Ashton-under-Lyne.
HUDSON, JOHN CYRIL	55, Cross Street, Manchester.
JACKSON, ALFRED ERNEST	City Surveyor's Office, Manchester.
JACKSON, ROBERT EWAN	Hall Gowan, Carnforth.
JONES, ARTHUR DEW	City Surveyor's Office, Town Hall, Manchester.
KEIGHLEY, SAMUEL.. .. .	27, Nicholas Street, Burnley.
KERSHAW, SAMUEL RYDER	Holly House, Bury Old Road, Manchester.
KIRK, ALLAN	12, Paton Street, Piccadilly, Manchester.
KIRKWOOD, NORMAN FRASER ..	68, Brook Road, Blundellsands.
LAMBLE, WILLIAM HERBERT ..	247, Littleton Road, Lower Kersal, Manchester.

LANCASTER, SIDNEY JAMES	Union Valuers' Office, 4, King Street, Blackburn.
LEECH, ARTHUR CLIVE	Worthington Lodge, Worthington, near Wigan.
LINNEY, JOSEPH FREDERIC	c/o W. H. Robinson, Cromwell Buildings, Blackfriars Street, Manchester.
LUKE, JOHN	3, Dartmouth Road, Chorlton-cum-Hardy, Manchester.
MAIR, WILLIAM FRASER.. ..	The Elms, Stretford, Manchester.
MASON, ARNOLD STEWART	Engineer's Department, Corporation Waterworks, Liverpool.
MORRISON, DANIEL.. ..	41, John Dalton Street, Manchester.
MORTON, THOMAS CHALMERS	5, Cross Street, Manchester.
NUTTALL, GEORGE PURCELL	Mount Sion, Manchester Road, Bury.
OVENDEN, HUGH	183, Tulketh Brow, Ashton, Preston.
OWEN, JOHN	24, Handfield Road, Waterloo, Liverpool.
OWEN, TREVOR AP ROWLAND	Sandy Nook, Seaforth, Liverpool.
PALMOUR, FREDERICK JOHN CLIFFORD	Bank House, Latham Street, Preston.
PEARSON, THOMAS GIBSON	Town Hall, Barrow-in-Furness.
PENNINGTON, STANLEY MUNCASTER	Sandfield House, Hawthorn Road, Bootle.
PERCIVAL, FRANK NEVILLE	Eastwood, Agnew Street, Lytham.
PERRINS, GEORGE LATHAM	13, Cambridge Road, Lytham.
POTTS, GILBERT ACKROYD	34, Victoria Buildings, Victoria Street, Manchester.
PUNCHARD, THOMAS WILLIAM	3, Westbourne Terrace, Lancaster.
REYNOLDS, ARTHUR HUGH	Holton, Blundellsands, Liverpool.
RICE, BENJAMIN LOUIS	17, Dale Street, Liverpool.
RIGBY, REGINALD	Rosebank, Prestwich, Manchester.
SAVAGE, TOM ALBERT	55, Mills Hill Road, Middleton Junction, Manchester.
SCHOFIELD, PETER.. ..	County Highway Department, 49, Regent Street, Lancaster.
SCHOLES, JOHN GREAVES	Samlesbury Vicarage, Preston.
SELBY, JOHN BASELEY	Atherton Hall, Leigh, near Manchester.
SUTCLIFFE, ALBERT JAMES	10, Victoria Street, Liverpool.
TURNER, HAROLD ERNEST	118, Stamford Street, Ashton-under-Lyne
TURNER, HENRY	17, Lark Avenue, Penwortham, near Preston.
TURNER, HERBERT.. ..	49, Deansgate, Manchester.
WALMESLEY-COTHAM, IVAN	17, Aughton Road, Birkdale, Southport.
WARD, JOHN ELDON	10, Wyresdale Road, Bolton.
WHINNERAH, WILLIAM	Polefield Hall, Prestwich.
WHITAKER, GEORGE	Engineer's Department, Fylde Water Board, Sefton Street, Blackpool.
WILLIAMS, JOSEPH BERTRAM	54, Church Street, St. Helens.
WILLIAMS, WORTHINGTON ERIC	44, Richmond Street, Ashton-under-Lyne.

ASSOCIATE :

KING, WILLIAM, M.I.C.E. . . . | 5, Beach Lawn, Waterloo, Liverpool.

LEICESTERSHIRE.

(Leicestershire, Northamptonshire, and Rutland Committee.)

FELLOWS :

BANKS, FREDERICK STUART ANGUS	Lloyd's Bank Chambers, Leicester.
CHARLES, ARTHUR	Noseley Estate, Billesdon, Leicester.
CLOUGH-TAYLOR, HORACE GEORGE	39, Friar Lane, Leicester.
COALES, HERBERT GEORGE,	
A.M.I.C.E.	Local Board Offices, Market Harborough.
*DRAPER, ARTHUR THOMAS	Friar Lane, Leicester.
EVERARD, JOHN BREEDON, M.I.C.E.,	
F.R.I.B.A.	6, Millstone Lane, Leicester.
FISHER, CHARLES BROWNING	Market Harborough.
GERMAN, GEORGE	Rawdon Terrace, Ashby-de-la-Zouch.
GERMAN, HARRY	The Gables, Ashby-de-la-Zouch, and
	Loughborough
*GERMAN, JOHN	Ashby-de-la-Zouch.
HAIGH, THOMAS FREDERICK	Messrs. Miller and Haigh, 25, Halford
	Street, Leicester.
HINCKS, HENRY THORP.. . . .	Wigston Hall, Leicester.
HOLLOWAY, HARRY HOWNAM	Market Harborough.
MARTIN, ROBERT FREWIN	Mountsorrel, Loughborough.
*ROLLESTON, SIR JOHN FOWKE	
LANCELOT, M.P.	Grey Friars, Leicester.
*ROLLESTON, WILLIAM GUSTAVUS	
STANHOPE	Grey Friars, Leicester.
THORPE, JOHN.. . . .	Market Bosworth.
WADE, GEORGE TEMPEST	Halford Street, Leicester.
*WOOLLEY, W. EDWARD.. . . .	Rectory Place, Loughborough.

PROFESSIONAL ASSOCIATES :

ASPELL, FRED HEWLINGS	47, Glenfield Road, Leicester.
BALDWIN, AUSTIN PROVOST.. . . .	Messrs. Holloway Price and Co., Market
	Harborough.
BURT, JOHN THOMAS	6, Millstone Lane, Leicester.
CRUMP, EDWARD HAROLD	Urban District Council Offices, Hinckley.
DARNELL, CHARLES TILLEY	Northfield Road, Blaby, near Leicester.
DAVIS, NEVILLE B., A.M.I.C.E. . . .	Waterworks Office, Leicester.
EVERARD, BERNARD	6, Millstone Lane, Leicester.

FISHER, EDWARD HUMBERT ..	Church Farm, Desborough, Market Harborough.
GIMSON, MARTIN	White House, Clarendon Park, Leicester.
JOYCE, HARRY WARD, B.SC. ..	Alton Grange, Ashby-de-la-Zouch.
KEAY, WILLIAM	21, Danes Hill Road, The Fosse, Leicester.
LAIRD, NINIAN PARKER.. ..	Thurnby, near Leicester.
ORCHARD, ALFRED DEAN	Market Bosworth.
ORTON, WILLIAM GOODACRE ..	9, Gopsall Street, Leicester.
PEARSON, GEORGE PARKER	Sutton Bonington, near Loughborough.
SNOW, HENRY CYPRIAN.. ..	8, Pocklington's Walk, Leicester.
TAYLOR, ALFRED MOULTON	Cotesbach, Lutterworth.
THOMPSON, JOHN CLULOW	Knighton House, Leicester.
WARTNABY, CHARLES RICHARD ARNOLD	Clipston, Market Harborough.
WOOLLEY, MAURICE THEODORE ..	Rectory Place, Loughborough.

LINCOLNSHIRE.

(Nottingham and Lincoln Committee.)

FELLOWS :

BEASLEY, THOMAS CALVERT PLATT	Harston, Grantham.
CORBY, JOSEPH BOOTHROYD	15, All Saints' Place, Stamford.
CROFTS, EWAN NEVILLE	Caythorpe, Grantham.
*HIGGINS, FREDERIC	Alford.
INGRAM, JAMES FRANCIS.. ..	26, Victoria Street, Grimsby.
KERR, JOHN MURRAY	Inland Revenue, London City and Midland Chambers, High Street, Lincoln.
MASON, CHARLES	Newton House, Queen Street, Louth.
ORWIN, CHARLES STEWART	Estate Office, Panton, Wragby.
RICHARDSON, CHARLES	15, Barn Hill, Stamford.
RICHARDSON, JAMES	13, Barn Hill, Stamford.
*TINDALL, CHARLES WILLIAM ..	Wainfleet, S.O.
TURTON, EDWARD JAMES	Horkstow, Barton-on-Humber.
WALKER, GEORGE BOOTH	Wainfleet.
WOOLLEY, REGINALD	Silver Street, Lincoln.

PROFESSIONAL ASSOCIATES :

BELL, HARRY CECIL	Shirley Croft, Grantham.
BUTTRICK, WALTER HAMMOND ..	107, High Street, Scunthorpe.
INGLEBY, ERNEST JAMES, N.D.A. ..	Normanton Lodge, Stamford.
JOHNSON, WILLIAM INGLIS	Estate Office, 18, St. Mary's Street, Stamford.

KENDZIOR, FRANK FELIX	Burton, Lincoln.
NELSON, EDWARD RUSSELL	Valuer's Office, 26, Victoria Street, Grimsby.
PATON, HUGH	Rose Cottage, Syston Park, Grantham.
RIGGALL, JABEZ ALLAN	Heck House, Grimsby.
ROYDS, HENRY GEORGE TROWER..	Burghley Estate Office, Stamford.
WOOD, HAROLD	4, South St. Mary's Gate, Grimsby.
WOOD, LEONARD	4, South St. Mary's Gate, Grimsby.
WRIGHT, PHILIP CHETWOOD	Brattleby Hall, near Lincoln.

ASSOCIATE :

SCOTT, THE HON. HENRY ROBERT	Belvoir Castle, Grantham.
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MIDDLESEX.

(Bedford, Essex, Hertford, and Middlesex Committee).

FELLOWS :

APPLEBY, JOHN HENRY JAMES ..	Corona, Chester Road, Northwood.
ASSITER, HARRY G... ..	The Weald House, Harrow Weald.
BARKER, FREDERICK GEORGE ..	Boldrewood, King Edward's Grove, Teddington.
BROWN, REGINALD	Town Hall, Southall.
EVES, FRANCIS GEORGE BERTRAM	54, High Street, Uxbridge.
EVES, WILLIAM LIONEL.. ..	54, High Street, Uxbridge.
GOADBY, HOWARD	72, Clifden Road, Twickenham.
HORNE, EDMUND	High Street, Hounslow.
JARMAIN, WILLIAM	Fairfield, Hatch End, Pinner.
LAKE, CUTHBERT JOSEPH	Hatch End.
MARTIN, THOMAS	67, Teddington Park, Teddington.
NORMAN, HERBERT JOHN	Clare Lodge, Southall.
NORMAN, JAMES MAURICE	Uxbridge.
PEARCE, FRED W.	Surveyor's Office, Town Hall, Twicken- ham.
STANTON, GEORGE WALTER	2, College Road, Harrow-on-the-Hill.
STURT, CHARLES EDWIN.. ..	16, St. Stephen's Gardens, East Twicken- ham.
WAIN, GEORGE SPARROW	Valuer's Office, 10, College Road, Harrow.
WOODBIDGE, STEPHEN, JUN. ..	210, High Street, Brentford.
WOODS, ARTHUR GEORGE	Hampton House, Grove Road, Hounslow.
WOODS, THOMAS	4 and 5, Church Parade, Hounslow.
WREATHALL, ROBERT T... ..	Manor House, Greenhill, Harrow.

PROFESSIONAL ASSOCIATES :

BROWN, CHARLES GEORGE	Park Place, Harefield.
BUCKLAND, WILLIAM THOMAS	72, Clifton Road, Twickenham.
BULLER, FRANCIS CHARLES	84, Amyand Park Road, Twickenham.
CORBLE, ARCHIBALD HARRISON	Langdale, Chase Side, Enfield.
CRANFIELD, GUY WILLIAM	Bramley House, Enfield.
EACHUS, CHARLES ALFRED EEDS	Hurstleigh, Bycullah Avenue, Enfield.
ELLIS, CHARLES EVELYN	Brookside, Bush Hill Park, Enfield.
FARTHING, CHARLES HAROLD	6, Station Yard, Twickenham.
FRANKLIN, HERBERT JOHN	5, Risingholme Villas, High Road, Wealdstone.
GARNHAM, EDWIN ALFRED VICKERY	2, Sheepcote Road, Harrow.
GIMSON, ALLEN	Cleavelands, Love Lane, Pinner.
GUMBRELL, LEONARD BARTON	87, Holmesdale Road, Hampton Wick.
HORNE, EDMUND PEISLEY	6, Staines Road, Hounslow.
HOSKEN, WILFRID	Surveyor's Department, Hendon R.D.C., Great Stanmore.
JACKSON, LEONARD LABREY	Messrs. Hosking and Booth, Auction and Estate Offices, Twickenham.
KING, GILBERT RIGLEY	Town Hall, Twickenham.
MCDONALD, JAMES RATCLIFF	Charlton House, Charlton, nr. Shepperton.
MARRIAN, HAROLD GREENWOOD, A.M.I.C.E.	Bank Chambers, Twickenham.
MONTGOMERY, GEORGE	4, South View Villas, Risingholme Road, Wealdstone.
NEWMAN, PERCIVAL CORNEY, A.R.I.B.A.	20, Copthall Gardens, Twickenham.
PARKER, WILFRED HORSLEY	The Garth, Stanmore.
PILKINGTON, JAMES MONTEATH	Foxley, Heming Road, Edgware.
ROBERTS, FREDERICK LEONARD	Catterall, Chestnut Avenue, Hampton-on-Thames.
SMITH, WILLIAM BOULTON	Council Offices, Hampton.
THOMPSON, FREDERICK WILLIAM	Birkrigg, Ashford.
TURNER, AUGUSTUS GARDNER	Westbourne House, Richmond Road, Twickenham.
VICKERMAN, MONTAGUE HAROLD	Ossulston, Copland Avenue, Wembley.
WINTLE, ARTHUR	Kingsdown, Strawberry Hill Road, Twickenham.
WOOLNOUGH, TOM	Fleet House, Hopper's Road, Winchmore.

ASSOCIATE :

THORNE, RICHARD SQUIRE, B.A. (Cantab.)	Nicoll Farm, Edgware.
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MONMOUTHSHIRE.

(Wales (South) and Monmouthshire Committee.)

FELLOWS :

HITCHCOX, WILLIAM	Bank Chambers, Newport.
HUMPHREYS, JOHN HENRY	Castle House, Usk.
POWELL, FREDERICK ATKINSON, F.R.I.B.A.	Agincourt Square, Monmouth.
REES, WILLIAM GEORGE	Holly House, Newport.
TANNER, WILLIAM	County Surveyor, Newport.

PROFESSIONAL ASSOCIATES :

BENNETT, STEPHEN AUGUSTUS ..	Deputy County Surveyor, Newport.
GRIGGS, HENRY JENNER, A.R.I.B.A.	Metropolitan Bank Chambers, Newport.
HARDING, CHARLES REGINALD ..	County Land Agent's Office, County Council Buildings, Newport, and Inglefield, Llanthewy Road, Newport.
INNES, GILBERT PLANTAGENET MITCHELL	Tredegar Estate Office, Newport.
NASH, HARRY NORTON	District Valuer's Office, 24, Bridge Street, Newport.
THOMAS, FREDERICK JAMES	35, Somerset Road, Newport.

NORFOLK.

(Cambridge, Huntingdon, Norfolk, and Suffolk Committee.)

FELLOWS :

BACON, HORACE	Attleborough.
BECK, ARTHUR CLEMENT	North Runciton, King's Lynn.
*BECK, EDWARD WILLIAM	16, Bank Street, Norwich.
BURROUGHES, CHARLES FITZ- PATRICK	Estate Office, Quidenham, Attleborough.
EASTER, WILLIAM	Wiggenhall St. German, King's Lynn.
FALCON, MICHAEL	Horstead House, Norwich.
GAYFORD, HENRY JOHN	Raynham Estate Office, East Raynham.
GOODCHILD, RALPH HARRY	Bank House, East Dereham.
*HAWKINS, CHARLES	Downham Market.
HAWKINS, LANCELOT GOULDER ..	Downham Market.
HORNOR, CHARLES JARED	32, Prince of Wales Road, Norwich.

HORNOR, FRANCIS	Queen Street, Norwich.
IRELAND, EDWIN BENJAMIN	Guestwick, East Dereham.
MILLS, SAMUEL MEALING	51, London Street, Norwich.
MORGAN, BENJAMIN BRAUFORD ..	1, Upper King Street, Norwich.
*SALTER, WILLIAM HERBERT ..	The Hall, Attleborough.
WATNEY, WALTER DANIEL	57, London Street, Norwich.
WIDDICOMBE, CHARLES EDWIN ..	Valuation Department, King's Lynn.
WRIGHT, WILLIAM EDWARD ..	King's Lynn.

PROFESSIONAL ASSOCIATES :

ARNOLD, HARRY HAGON	Victoria Chambers, Bank Plain, Norwich.
BARNARD, DENNIS CHRISTOPHER ..	The Shirehouse, Norwich.
BARNHAM, GEORGE WILLIAM ..	Griston, Watton.
BODGER, PERCY MORRIS	28, Bishopsgate Street, Norwich.
DAVIES, WILLIAM GWYNNE BATCHELOR	Valuer's Office, King's Lynn.
ELMES, FREDERICK LANSELL ..	Priory Chambers, Cromer.
FIELDING, KENNETH HUBERT ..	3, Redwell Street, Norwich.
FRANCIS, THOMAS JOHN PHILIP ..	Valuer's Department,, King's Lynn.
FREUER, WILLIAM SAMUEL	Great Massingham, King's Lynn.
GOWING, CHARLES TOWLER	White Hall, Sprowston, Norwich.
HAWKINS, EDWARD ROBINSON ..	Downham Market.
HORNOR, BASSETT FARDELL ..	Old Bank of England Court, Queen Street, Norwich.
KNIGHT, CHARLES WILLIAM	32, Cardiff Road, Norwich.
MENZIES, ROBERT	Merton Estate Office, Thetford.
MILES, JOHN GUILFORD	The Denes, Great Yarmouth.
OLDFIELD, CLAUDE COURTENAY ..	66, London Road, King's Lynn.
PALMER, CHARLES DRAYTON ..	208, Unthank Road, Norwich.
PAUL, GEORGE GARNHAM	Gunton Park, Norwich.
PEAKE, ALBERT EDWARD	County Council Offices, Downham Market.
POWELL, WALLACE GERALD ..	City Engineer's Office, Norwich.
PRATT, JERMYN HAROLD	Ryston Hall, Downham.
SALTER, WILLIAM ERIC	25, Thorpe Road, Norwich.
SMITH, DOUGLAS	Orford Estates Office, Thwaite, Erpingham.
SMITH, FRANK HALL	Surveyor's Office, Sheringham.
SPELMAN, WILLIAM WILTON RIX ..	17, Bank Plain, Norwich.
TILLYARD, SIDNEY JOSEPH	51, London Street, Norwich.
WALKER, HENRY HAVELOCK ..	Richmond Chambers, Railway Road, Sheringham.
WATERS, FRANK	15, Bank Plain, Norwich.
WHITAKER, HUGH	Valuation Department, King's Lynn.
WILLIAMS, FRANK MCCLURE ..	Merton, Watton, Norfolk.
WISE, FREDERICK JOHN	Valuation Department, Inland Revenue, King's Lynn.
WOOLLEY, REGINALD GEORGE ..	The Hill, Sheringham.
WRIGHT, THOMAS HENRY GORDON	Bank Plain, Norwich.

NORTHAMPTONSHIRE.

(Leicestershire, Northamptonshire, and Rutland Committee.)

FELLOWS :

LETSOE, HENRY HOPKINSON ..	Thrapston.
AVE, THOMAS NEWMAN ..	Horton.
DICKSON, THOMAS ARTHUR ..	Estate Office, Overstone Park, Northampton.
DMONDS, JOHN	Drayton Estate Office, Islip, Thrapston.
AURANCE, JOHN	Shortacre, Peterborough.
ARSH, FREDERICK STEPHEN ..	Waverley, All Saints Road, Peterborough.
ERRY, THOMAS	9, Abington Street, Northampton.
DRIVEN, RICHARD GEORGE ..	Castle Ashby, Northampton.
OWELS, WILLIAM CLOWES ..	Little Everdon, Daventry.
HRING, DOUGLAS THEODORE ..	Boughton House, near Kettering.
ILMOT, HUBERT DE BURGH ..	The Milton Estate Office, Priestgate, Peterborough.

PROFESSIONAL ASSOCIATES :

AGSHAW, NOEL BOUGHTON..	Iselden, Headlands, Kettering.
EARN, ARTHUR FREDERICK ..	Cedar Lawn, Wellingborough.
BROWN, JOHN	Abingdon Street, Northampton.
LARKE, PERCY CHRISTOPHER ..	Orton Longueville, Peterborough.
COOPER, CECIL FRANCIS ADRIAN ..	Wootton, Northampton.
ROFT, CHRISTOPHER	The Elms, Dallington.
ESSUP, DAVID POOLEY..	Inland Revenue, County Chambers, Northampton.
HAW, FREDERICK JOHN ..	1, Craig Street, Lincoln Road, Peterborough.
TOPS, HERBERT JACKSON ..	Towcester.
WALKER, CECIL EDWARD ..	33, Westgate, Peterborough.
HITTON, HAROLD WILLIAM ..	County Chambers, The Drapery, Northampton.

NORTHUMBERLAND.

(Northumberland and Durham Committee.)

FELLOWS :

ARMSTRONG, THOMAS JOHN ..	14, Hawthorn Terrace, Newcastle-on-Tyne.
YNSLEY, ROBERT JOHN ..	Fencer Hill, Gosforth, Newcastle-on-Tyne.

*CLARK, JOHN McCLARE.. .. .	Haltwhistle, and Hexham.
EDGE, FREDERIC JAMES, M.I.C.E.	38, Blackett Street, Newcastle-on-Tyne
GRIMWOOD, ARTHUR	Inland Revenue, 4, Mosley Street, Newcastle-on-Tyne.
HINDMARSH, RALPH FREDERICK..	Tyne Improvement Commission, Engineer's Office, Newcastle-on-Tyne.
JAMES, CHRISTIAN HUGH	Rudchester, Wylam-on-Tyne.
PARMETER, FRANK.. .. .	Bowland Lodge, Grainger Park Road, Newcastle-on-Tyne.
*SAMPLE, CHARLES HERBERT, B.A. (<i>Cantab.</i>)	Matfen, near Newcastle-on-Tyne.
SAMPLE, WILLIAM COLLINGS	Tritlington Hall, Morpeth.
SANDERSON, WILLIAM WAITE	Kenton Hall, Kenton.
SCOTT, JOHN	5, Market Place, Morpeth.
SMITH, STANLEY ADDISON	Emerson Chambers, Blackett Street, Newcastle-on-Tyne.
TAYLOR, HARRY WILLIAM, A.M.I.C.E.	Cathedral Buildings, Dean Street, Newcastle-on-Tyne.
TAYLOR, JOHN WALTON, F.R.I.B.A.	St. John Street, Grainger Street West, Newcastle-on-Tyne.
TOWNEND, WILLIAM	4, Mosley Street, Newcastle-on-Tyne.
*WALKER, SIR FRANCIS ELLIOTT, BART.	Swansfield House, Alnwick.

PROFESSIONAL ASSOCIATES :

ALLEN, JOHN PARNELL.. .. .	23, Victoria Buildings, Grainger Street West, Newcastle-on-Tyne.
ARMSTRONG, CLIVE HEATH	Westgate, Haltwhistle.
AYNSLEY, DOUGLAS FARRER	24, Wolveleigh Terrace, Gosforth, Newcastle-on-Tyne.
BOWES, OSBORNE JOHNSTONE	Messrs. J. P. Allen and Partners, Victoria Buildings, Grainger Street West, Newcastle-on-Tyne.
CROSIER, CHARLES	2, Northumberland Avenue, Forest Hall, Newcastle-on-Tyne.
CROWLEY, WALTER ST. LEGER	Mosley Chambers, 30, Mosley Street, Newcastle-on-Tyne.
FOX, JOHN HARPER GRAHAM.. .. .	Wyndale, Belgrave Parade, Newcastle-on-Tyne.
HOLDFORTH, HAROLD	4, Mosley Street, Newcastle-on-Tyne.
HOLZAPFEL, JOHN WILLIAM, N.D.A.	North Elswick Hall, Newcastle-on-Tyne.
KER, ARTHUR PRESTON.. .. .	Moothall, Newcastle-upon-Tyne.
LANE, FREDERICK CHARLES	5, Market Place, Morpeth.
LIDDELL, JOHN GEORGE WALTON	Chesters Estate Office, Humshaugh.
McGHIE, CHARLES	38, Collingwood Buildings, Collingwood Street, Newcastle-on-Tyne.

KERROW, JAMES WEIR, A.M.I.C.E.	Corporation Waterworks, Town Hall, North Shields.
CUNDLE, ERNEST RANSON	42, St. George's Terrace, Jesmond, Newcastle-on-Tyne.
PARSON, NORMAN HANSON	52, Percy Park, Tynemouth.
EPHENSON, ROBERT BARNARD	Victoria Buildings, Grainger Street West, Newcastle-on-Tyne.
OWN, HENRY ANNANDALE	Killingwork House, Forest Hall, Northumberland, and Station Chambers, 10, Neville Street, Newcastle-on-Tyne.
URNBULL, ROBERT ERNEST	Estate Office, Gallowhill, Morpeth.
ELSH, MARTIN FREDERICK	1, Salisbury Gardens, Jesmond, Newcastle-on-Tyne.
HITE, WILLIAM, JUN.	33, Pilgrim Street, Newcastle-on-Tyne.
OOD, HERBERT CALVERT	Chesters Estate Office, Humshaugh-on-Tyne, S.O.

NOTTINGHAMSHIRE.

(Nottingham and Lincoln Committee.)

FELLOWS :

AILEY, WILLIAM SMITH	4, Kirkgate, Newark-upon-Trent.
ARNES, JOHN WILLIAM JAMES	Albion Chambers, King St., Nottingham.
ELL, JOSEPH ASKEW	Rufford Estate Office, Ollerton.
OOKER, FRANK WILLIAM	Valuer's Office, Inland Revenue, Nottingham.
RACKETT, WM. NEWBEGIN	Market Place, Retford.
ALVERT, ARTHUR RICHARD	18, Low Pavement, Nottingham.
LEMENTS, CYRIL JOHN	11, Park Avenue, Mansfield.
RAMPTON, ARTHUR WESLEY	Leyton Avenue, Mansfield.
VE, CHARLES GERALD	Inland Revenue, Westminster Buildings, Nottingham.
AYNES, HENRY	Estate Office, Clifton, Nottingham.
INE, GEORGE THOMAS	Victoria Street, Nottingham.
USKINSON, ERNEST AMPHLETT	Epperstone, near Nottingham.
USKINSON, THOMAS WM.	Epperstone Manor, Nottingham.
ISTER-KAYE, CHARLES WILKINSON	Osberton, Worksop.
AGGS, LEONARD	The Hollies, Walnut Grove, Radcliffe-on-Trent.
MORRIS, CHARLES	The Lodge, Radcliffe-on-Trent, and 27, Bridlesmith Gate, Nottingham.
ARKIN, WILLIAM	Babworth, Retford.
AYLOR, WILLIAM HENRY	Nuttall, Nottingham.

TURNER, THOMAS WARNER	Langwith Lodge, Mansfield.
WALKER, HERBERT, M.I.C.E., F.R.I.B.A.	Albion Chambers, King Street, Nottingham.
*WALKER, JOSEPH	South Road, The Park, Nottingham.
*WALKER, JOSHUA	Bridge Offices, Bridgegate, Retford.
WIGRAM, JOHN	South Collingham, Newark.
WOOLLEY, REGINALD	South Collingham, Newark.
WOOLLEY, THOMAS CECIL SMITH ..	South Collingham, Newark.
WORDSWORTH, ROBERT WALTER ..	Whitemoor, Ollerton.
*WRIGHT, CHARLES WILLIAM, M.A. (<i>Cantab.</i>)	21, Parkinson Street, Nottingham.

PROFESSIONAL ASSOCIATES :

BELL, FRANCIS ASKEW	Wellow House, Newark.
BROOKS, WILLIAM NATHANIEL ..	Collingham, Newark-on-Trent.
BUTTERWORTH, JOSIAH	Mansfield.
CHILD, EDMUND HERBERT, A.R.I.B.A.	12, Middle Pavement, Nottingham.
CONQUEST, CLAUDE DUNCOMBE ..	Valuer's Office, Westminster Buildings, Upper Parliament Street, Nottingham.
CONRAN, WILLIAM ADAM BASTARD	Valuer's Department, Westminster Buildings, Upper Parliament St., Nottingham.
HICKS, ARTHUR LESLIE	Inland Revenue, Westminster Buildings, Nottingham.
JAMES, FRANK J.	Rectory Road, West Bridgford, Nottingham.
MORRIS, ARTHUR	3, Derby Terrace, Nottingham.
PAIN, WILLIAM HENRY	Carnarvon Estate Office, Bingham.
PAYNE, WILLIAM PERCY	Holmesdale, The Park, Nottingham.
RANDALL, AUGUSTINE ST. GEORGE	Derby House, Nottingham.
ROBERTSON, WILLIAM ANDREW ..	Purley, Dagmar Grove, Alexandra Park, Nottingham.
SCALES, ARTHUR ALFRED	Valuation Department, Inland Revenue, Nottingham.
TAYLOR, RUSSELL LEIGH	Newcastle Estate Office, Worksop.
WIGRAM, HENRY JOSEPH	The Lodge, South Collingham, Newark.
WILSON, JAMES CALVERT	Newcastle Estate Office, The Park, Nottingham.

OXFORDSHIRE.

(Berks, Bucks, and Oxon Committee.)

FELLOWS

CASTLE, ARTHUR	11, King Edward Street, Oxford.
DAVIS, CHARLES EDWARD, B.A. (<i>London</i>)	Wroxton Estate Office, near Banbury.

*FIELD, FRANCIS HAYWARD ..	11, King Edward Street, Oxford.
HOLIDAY, FREDERICK DEAN ..	Bicester.
HOLIDAY, PERCY CAVE	Bicester.
JONES, FRANCIS WILLIAM	2, Frewin Court, Corn Market Street, Oxford.
LIGHTFOOT, HENRY LE BLANC, M.A. (<i>Oxon.</i>)	Corpus Christi College, Oxford.
LITTLE, WILLIAM DAVIS.. ..	Middleton Stoney, Bicester.
MAXWELL, JOSEPH ARCHIBALD..	21, Marlborough Road, Banbury.
SIMMONS, CHARLES FRANKLIN ..	Henley-on-Thames.
*SIMMONS, W. ANKER	Henley-on-Thames.
WATSON, DAVID ALEXANDER ..	Estate Office, Watlington.

PROFESSIONAL ASSOCIATES :

DEWE, WALLACE	Knollsleigh, Henley-on-Thames.
DODD, HAROLD JAMES	The Mount, Goring-on-Thames.
GRIPPER, EDWARD CUTBUSH..	54, Aston Street, Oxford.
HURCOMB, HAROLD FRANCIS..	32, Warnborough Road, Oxford.
JONES, FRANK CECIL	Frewin Court, Corn Market Street, Oxford.
JONES, MONTAGUE WILLIAM ..	Frewin Court, Corn Market Street, Oxford.
LANHAM, LAURENCE	36, Beaumont Street, Oxford.
MARTIN, VICTOR CALLINGHAM ..	The Nook, Shiplake-on-Thames.
MAY, CYRIL ERNEST	Messrs. Simmons and Sons, Henley-on- Thames.
MORSE, DUDLEY WALTER	Kirtlington, Oxford.
MURRELL, SIDNEY JAMES	86, Beaumont Street, Oxford.
ROSE, EDWARD JOSEPH.. .. .	58, Corn Market Street, Oxford.
ROWLAND, WILLIAM JOHN W. ..	Lower Farm, Shabbington, Thame.
WORRALL, BERTRAM	Rectory Farm House, Steeple Aston, Oxford.
WRIGHT, REGINALD LESLIE	33, New Street, Henley-on-Thames.

ASSOCIATE :

SOMERVILLE, WILLIAM, M.A., D.SC.	121, Banbury Road, Oxford.
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RUTLANDSHIRE.

(Leicestershire, Northamptonshire, and Rutland Committee.)

FELLOWS :

ROYCE, DAVID NEEDHAM .. ..	| Oakham.
ROYCE, JOHN .. .. .	| Oakham.

SHROPSHIRE.

(Salop, Hereford, and Mid-Wales Committee.)

FELLOWS :

ASHDOWN, AUGUSTUS HARDING ..	Uppington, Wellington.
BATHER, JOHN T.	9, The Square, Shrewsbury.
DAVIS, ALFRED THOMAS, A.M.I.C.E.	Shire Hall, Shrewsbury.
DODGSON, WILFRED LONGLEY ..	5, Mill Street, Ludlow.
EVANS, WILLIAM ERNEST ..	School Gardens, Shrewsbury.
FENN, ANDREW THOMAS CRANAGE	Talbot Chambers, Shrewsbury.
HALL, WILLIAM TIMOTHY ..	College Hill, Shrewsbury.
HAZLEDINE, JOHN TURNER CLOUGH	Gateway Chambers, Shrewsbury.
HICKMAN, THOMAS.. . . .	College Court, Shrewsbury.
MORRIS, EDWARD HENRY ..	Chirbury.
MORRIS, WILLIAM HENRY ..	Monksfield, Chirbury.
NEWILL, ROBERT HENRY ...	Lydbury North.
OWEN, HENRY.. . . .	Dana Chambers, Shrewsbury.
PALAMOUNTAIN, JOSEPH WILLIAM	Cloverley Estate Office, Whitchurch.
RAFFETY, HERBERT WILLIAM ..	Valuation Department, Inland Revenue, Shrewsbury.
RICHARDS, WALTER.. . . .	12, Swan Hill, Shrewsbury.
TOWER, BROWNLOW RICHARD CHRISTOPHER	Bridgewater Estate Office, Ellesmere.
WOLLEY, THOMAS JOHN.. . .	Chungunford Estate Office, Aston-on- Clun.
*WYLEY, HENRY JAMES.. . .	Bridgnorth.

PROFESSIONAL ASSOCIATES :

BROWN, JAMES CARTER.. . .	Harper-Adams Agricultural College, Newport.
EDWARDS, THOMAS JAMES ..	Poole House, Clee Hill, near Ludlow.
HATTON, JOHN DOUGLAS ..	Messrs. Hall and Steavenson, College Hill, Shrewsbury.
HICKMAN, ARTHUR MURHALL ..	Pride Hill Chambers, Shrewsbury.
MAC KINNON, ALEXANDER DENT OSWALD ,	Messrs. Burd and Evans, School Gardens, Shrewsbury.
MILLS, DANIEL.. . . .	Valuer's Department, Windsor House, Shrewsbury.
MURRAY, PENRY JOHN ..	Estate Office, Condover, Shrewsbury.
SALT, LEONARD EUSTACE ..	The Mount, Shrewsbury.
SCHILLING, JOHN FRANCIS ..	Walcot House, near Wellington.
WHITTINGHAM, LEWIS STUART ..	Estate Office, Millichope Park, Craven Arms.
WYLEY, HENRY CHARLES ..	Newmarket Buildings, Bridgnorth.

SOMERSETSHIRE.

(Somerset, Gloucester, and North Wilts Committee.)

FELLOWS :

ANDREW, THOMAS HAWKES	Northwood, Minehead.
BRINKWORTH, ROBERT EDWIN	16, Old Bond Street, Bath.
COATES, PERCY BREVITT.. ..	Fairholme, North Curry, Taunton.
EVANS, ERNEST SYDNEY	Inland Revenue, 6A, Hammet Street, Taunton.
GENGE, WILLIAM POPE, JUN.	Inland Revenue, 6A, Hammet Street, Taunton.
HIPPISLEY, WILLIAM JOHN	Northam House, Wells.
HOSEGOOD, ANDREW WEBBER	Williton.
MADGE, JOHN	Somerset House, Chard.
*NAPIER, HENRY BURROUGHES	Ashton Court Estate Office, Long Ashton, Clifton, Bristol.
PARSONS, ROBERT MAURICE	
PETERS	Misterton, Crewkerne.
PEARD, JOHN GRIGG	North Curry, near Taunton.
SHUFFLEBOTHAM, JOHN HENRY	Staplegrave, Taunton.
SILCOCK, THOMAS BALL, B.SC.	
(Lond.)	47, Milsom Street, Bath.
TREPPLIN, ERNEST C.	Stoke Court, Taunton.
WAINWRIGHT, CHARLES RAWLINSON	Shepton Mallet.
WELSH, HUGH.. .. .	Newton Park Estate, Newton St. Loe.

PROFESSIONAL ASSOCIATES :

ALVES, HAROLD NORMAN	21, Norbries Road, Glastonbury.
ASH, FRANCIS EDWARD	6, Ashfield, Chard.
BROWN, JOHN EDWARD.. .. .	Quantock Estate Office, Bridgwater.
CHAMBERS, WADDELOW NIX	Messrs. Taylor and Hunt, Yeovil.
DUCKWORTH, WALTER EDMUND	The Mart, Bridgwater.
FARWELL, EVELYN WOOD	11, Laura Place, Bath.
FISHER, THOMAS ROTELY	41, Everton Road, Yeovil.
GODDARD, HENRY GEORGE	
FREDERICK	14, Hammet Street, Taunton.
HARRISON, PERCY WALTON	Henford House, Yeovil.
JAMES, FREDERICK OSCAR	Holcombe, near Bath.
LOXTON, FRANCIS WILLOUGHBY	20, Princes Street, Yeovil.
MATTICK, ALLAN WALTER GEORGE	Market Place, Radstock.
MILLS, ROBERT HENRY.. .. .	The Bungalow, Combe Down, Bath.
MORGAN, IFOR JOHN	Butts, Ilminster.
OLDNALL, ROGER WILLIAM, B.A.	Portswood, Walliscote Road, Weston-
(Cantab.)	super-Mare.
ORCHARD, SIDNEY SAMUEL	St. Creech Michael, Taunton.

RISDON, JOHN PEART	Wiveliscombe.
SAUNDERS, CLEMENT	Inland Revenue Valuation Offices, Hammet Street, Taunton.
SHETTLÉ, EDWARD GURNEY	6, Princes Street, Yeovil.
STEAD, EDWARD JOHN, A.M.I.C.E.	County Surveyor's Office, Wells.
STONE, HENRY WALCOTT	Lloyd Bank Chambers, North Street, Taunton.
TAYLOR, GEORGE ARTHUR	Frome Hill, Radstock, Bath.
WILLIAMS, WILLIAM ALFRED	16, Old Bond Street, Bath.

STAFFORDSHIRE.

(Derby and Stafford Committee.)

FELLOWS :

BAILEY, PERCIVAL HENRY ASHBY	Valuer's Department, Prudential Chambers, Lichfield Street, Wolverhampton.
BREALEY, REGINALD WOODHOUSE	Daisy Bank, Leek.
BURTON, AMOS, A.M.I.C.E.	Borough Engineer, Town Hall, Stoke-upon-Trent.
*DUNCALFE, HENRY GEORGE	81, Darlington Street, Wolverhampton.
*FODEN, EDWARD ANTROBUS	Teddesley Estate Office, Penkridge.
FORSHAW, EDWARD	Hanley and Springfields Stramshall, Uttoxeter.
FORSHAW, WILLIAM	21, High Street, Hanley.
HARDY, RICHARD THOMAS ASH	Land Agency and Estate Offices, Carter Street, Uttoxeter.
*HARRISON, CHARLES	179, Horninglow Street, Burton-upon-Trent.
*HEATON, GEORGE HERBERT	Endon, near Stoke-upon-Trent.
JENKINSON, JOHN	The Hollies, Hopwas, Tamworth.
JONES, ARTHUR ERNEST	Hawthorn House, Merrial Street, New-castle-under-Lyne.
LYNAM, CHARLES, F.R.I.B.A.	Stoke-on-Trent.
LYNAM, GEORGE TROTTER	Town Hall, Burton-on-Trent.
NOCK, BENJAMIN BOWEN	48, Queen Street, Wolverhampton.
ROWLAND, JOSEPH SAMUEL	19, Station Street, Burton-on-Trent.
TERRY, ARTHUR ELLIOTT	The Firs, Compton, Wolverhampton.
VALE, HENRY	16, Darlington Street, Wolverhampton.
WINTERTON, HARRY JOHN CAMPION	St. Mary's Chambers, Lichfield.
WINTERTON, WILLIAM MOXON	30, High Street, Burton-on-Trent.

PROFESSIONAL ASSOCIATES :

BELL, WALLACE ALFRED	The Willows, Belvidere Road, Walsall.
BIBBEY, THOMAS	Stallington Estate, Cheadle.
BLOIS, BASIL FREDERIC	Messrs. Owen, Blois & Owen, Newcastle.

BOTT, WILLIAM ALFRED.. .. .	60, Newcastle Street, Burslem.
BRADSHAW, HAROLD CLAUD .. .	Biddulph, near Congleton.
CAPPER, WILLIAM	Holme Lea, Porthill, Stoke-on-Trent.
CHARLES, MICHAEL THOMAS, B.A. (<i>Cantab.</i>)	Pelsall Hall, near Walsall.
CRIMES, FREDERIC CHARLES .. .	Kidsgrove Urban District Council, Surveyor's Office, Kidsgrove.
DASHWOOD, LIONEL ALBERT.. ..	The Hawthorns, Gnosall.
EVANS, RUPERT MAURICE	Bank House, Stafford.
HOLLIS, RALPH EDMUND	District Valuer's Office, Prudential Chambers, Lichfield Street, Wolverhampton.
HUGHES, ALFRED, JUN.	64, Dudley Road, Tipton.
LYONS, EDWARD COLVILL	Estate Office, Rugeley.
OWEN, HARRY BERTRAM	Hawthorne Cottage, Hartshill, Stoke-on-Trent.
PLANT, CLIFFORD ERNEST	The Cedars, Clayton, Newcastle.
PLANT, WILLIAM, A.M.I.C.E. .. .	Borough Hall, Stafford.
RAWSTRON, CHARLES OLIVER .. .	Lichfield Rural District Council, Birmingham Road, Lichfield.
SMITHELLS, EDWIN.. .. .	Merlewood, Newport Road, Stafford.
STRATTON, PHILIP	Fernleigh, Merridale, Wolverhampton.
TEASDALE, GEORGE WILLIAM .. .	9, Persehouse Street, Walsall.
TURNER, VINCENT	Surveyor and Waterworks Engineer, Town Hall, Bilston.
WATSON, ALBERT RICHARD	12, Lombard Street, Lichfield.
WIGHTMAN, AUGUSTUS FREDERICK	89, Sutton Road, Walsall.

SUFFOLK.

(Cambridge, Huntingdon, Norfolk, and Suffolk Committee.)

FELLOWS :

ARNOTT, JOHN.. .. .	Church Street, Woodbridge.
*BLENOWE, GEORGE	Bury St. Edmunds.
DONNE, HENRY	The Abbey Ruins, Bury St. Edmunds.
GARRARD, NORTON BURROUGHS..	Hoxne, Eye.
JEFFERIES, HENRY CHARLES.. ..	Shaftesbury Lodge, Beccles.
MAXWELL, DAVID BENJAMIN .. .	Riverside, Great Blakenham, Ipswich.
PELLS, ARTHUR	13, London Road, Beccles.
SCOTT, ARCHIBALD LACY	Long Melford.
*SIMPSON, ROBERT THOMAS .. .	Horsecroft, Bury St. Edmunds.
STIRTON, THOMAS	Fernley House, Crescent Road, Ipswich, and Rendlesham Estate Office, Woodbridge.

PROFESSIONAL ASSOCIATES :

AYLMER, GUY	Risby Manor, Bury St. Edmunds.
BAYNHAM, EDMUND CHRISTOPHER	The Abbey, Eye.
BOND, FREDERICK GEORGE	Old Bank House, Ipswich.
BROWNE, GEORGE FREDERICK ..	16, Museum Street, Ipswich.
CHARTRES, FREDERICK WILLIAM CHARLES	Whitehall, Willingham, Beccles.
COBBE, HENRY ALEXANDER	The Turrets, Northgate Street, Bury St. Edmunds.
COOK, EDWARD ARTHUR	Dennington Lodge, Framlingham.
GEE, FREDERIC GEORGE	37, St. John's Road, Ipswich.
GOULD, GEORGE HARRY BERTRAM	9, Tower Street, Ipswich.
HALL, THOMAS BIDDLE	Hoxne, near Eye.
ISITT, SAMUEL GILBERT, N.D.A. ..	Ashe Green, Campsea Ashe, Wickham Market.
JARVIS, ERNEST HENRY	Messrs. Arnott and Son, Woodbridge.
JENNINGS, DANIEL STRACHAN ..	Messrs. Rutter and Co., 30, Abbeygate Street, Bury St. Edmunds.
JENNINGS, FREDERICK GEORGE ..	Cockfield Hall, Bury St. Edmunds.
KEMP, HARRY GRAEME	The Elms, Aldringham, Saxmundham.
KING, JOHN LEONARD	53, Friars Street, Sudbury.
PARKER, FRANK GRANGER	Mildenhall.
PATTISSON, WILLIAM HENRY MUNNINGS	Estate Office, Helmingham.
RODWELL, LIONEL HELM	The County Hall, Ipswich.
SEAGO, RALPH WOLLASTON	Custom House Buildings, Lowestoft.
SMITH, HAROLD ROBERT	The Cottage, Woodbridge.
SMITH, PERCIVAL	The Coffee Tavern, Needham Market.
STALLARD, HAROLD ORLANDO ..	Estate Office, Great Thurlow.
TAIT, WILLIAM IRONSIDE	The Town Hall, Sudbury.
TIDMARSH, CHARLES BAILLIE ..	Combs, Stowmarket.
TURNER, PERCY	Dale Hall, Henley Road, Ipswich.
WARD, REGINALD CHARLES	23, Princes Street, Ipswich.
WOODCOCK, RICHARD STANLEY ..	Haven House, Thorpe, near Leiston.
WOODWARD, HENRY GORDON ..	The Oaks, Bacton, Stowmarket.

SURREY.

(Surrey Committee.)

FELLOWS :

APPS, BENJAMIN CHARLES	Kingsley Green, near Haslemere.
AYLEN, CECIL HUGH	Huntingdon Lodge, Benhill Road, Sutton.
BARFIELD, FREDERIC HENRY ..	18, Parkhurst Road, Sutton, Surrey.

BAVERSTOCK, HAROLD BRIDGE ..	Godalming.
BEALE, SYDNEY BENJAMIN ..	Sutton House, Brighton Road, Sutton.
BELL, ALBERT HENRY	Wonston, Addlestone.
BLAKE, WILLIAM JOHN	45, High Street, Croydon.
BOND, ERASMUS	Broadlands, St. George's Avenue, Wey- bridge.
BOWDITCH, HENRY	103, George Street, Croydon.
BOYD, JOHN JERMYN	Heath View, Weybridge.
BROWN, ARTHUR ALLEN	83, High Street, Croydon.
CARPENTER, EVAN GEORGE	4, Wellesley Court Road, Croydon.
CHART, CHRISTOPHER	Union Bank Chambers, Croydon.
CHART, ROBERT MASTERS	The Vestry Hall, Mitcham.
CLUTTON, RALPH WILLIAM	Hartswood, Reigate.
CRESWELL, WILLIAM THOMAS, LIC.R.I.B.A.	Epsom.
DASH, ROLAND ASHFORD	Oxshott.
DAVIES, JOHN NICHOLLS	Carim, Estella Avenue, West Barnes Lane, New Malden.
DEACON, STANLEY MARCUS.. ..	The Croft, Brownlow Road, Croydon.
*EGGAR, JAMES ALFRED	74, Castle Street, Farnham.
FINN, HERBERT ARCHIBALD.. ..	Hillside, St. Mark's Hill, Surbiton.
GALE, HARRY	High Street, Egham.
GRELLIER, HARLEY MAIR	Epsom.
HARPER, EDGAR JOSIAH.. .. .	Beech Hyrst, Haling Park Road, Croydon.
HILL, GEORGE FINLAY BURD ..	18, Woodcote Road, Wallington.
HINKS, HENRY.. .. .	1, Graham Road, Purley.
HOOPER, EDGAR WILFRED	Haslemere, Beemfort Road, Reigate.
HORSFIELD, JOHN NIXON, A.R.I.B.A.	Arden, Portsmouth Avenue, Thames Ditton
JARMAN, FRANK WILMOT	4, Wellesley Court Road, Croydon.
JEROME, THOMAS STROUD, LIEUT.- COL., I.S.O.	Mandora, Effingham Road, Surbiton.
LATHAM, ALBERT TUMMONS	100, High Street, Croydon.
LEE, WILLIAM	143½, High Street, Guildford.
MARTIN, HOWARD	Elstree, Nutfield.
MASON, HERBERT WALTER	The Hutch, Ferndale Road, Banstead.
MELLERSH, ALFRED WILLIAM ..	Godalming.
MENZIES, WILLIAM	Golspie, Englefield Green.
MESSINGER, WILLIAM HARRY ..	Town Hall Chambers, Guildford.
NASH, ALFRED JAMES	Farnham.
NEWBORN, CHARLES REGINALD ..	Danum Cottage, Leatherhead.
OSENTON, CHARLES	Leatherhead.
PAGE, GEORGE FREDERICK	Eagle Chambers, Kingston-on-Thames:
PARTRIDGE, EDWARD JOHN	Bank Chambers, 39, George St., Richmond.
PATCH, SHIRLEY HUTCHINS ..	The Chestnuts, Havelock Road, Addis- combe, Croydon.
PERRIAM, ALFRED JOSEPH	13, Quadrant Road, Thornton Heath.
PHILLIPS, WILLIAM EDWIN	Eagle Chambers, Kingston-on-Thames.

PILDITCH, WILLIAM THOMAS.. ..	4, Wellesley Court Road, Croydon.
POTTIER, GEORGE LOUIS.. ..	Wannock, Downs Court Road, Purley.
PRICE, FREDERICK PALEY	Crescent Lodge, The Crescent, Surbiton.
REFFELL, CHARLES ARTHUR	Thorney, Ennismore Avenue, Guildford.
SHEARBURN, HARRY, B.A. (<i>Cantab.</i>)	Munstead, Godalming.
SKUES, CHARLES AYRE MACKENZIE	Ye Haven, Hockering Road, Woking.
*SLATER, CHARLES FREDERICK ..	52 and 53, Cheapside, E.C.
SMITH, FRANK BRAYBROOKE ..	Coningsby, Furze Lane, Purley.
STACEY, HARRIE	Station Road, Redhill.
TERRY, ERNEST FAIRCHILD ..	Clavadel, Brighton Road, Surbiton.
THURGOOD, ALBERT EDWARD ..	1, Bury Street, Guildford.
WALMSLEY, ARTHUR TYNDAL, CAPTAIN	8, Surbiton Park Terrace, Kingston-on-Thames.
WARD, HENRY PAYNE.. ..	Burleigh, Reigate Road, Redhill.
WATTS, CHARLES	West-by-Thames, Kingston-on-Thames.
WEBB, WILLIAM	Keeper's Cottage, Furze Hill, Purley.
WENBORN, SIDNEY THOMAS, CAPTAIN	R.E. Office, R.M. College, Camberley.
WHITE, JAMES ALEXANDER ..	18, High Street, Dorking.
WILLIAMS, HAROLD.. ..	43 and 45, High Street, Croydon.
WOOD, DOUGLAS, A.R.I.B.A. ..	Orchard Cottage, Coombe Lane, Kingston Hill.
WOODCOCK, ROBERT FRANK ..	Haslemere.

PROFESSIONAL ASSOCIATES :

ADAMS, HUBERT ARTHUR	Bishop's Croft Cottage, The Mount, Guildford.
ANDERSON, THOMAS JOHN	6, St. James's Road, Kingston-on-Thames.
ANDREWS, PERCY CHARLES	24, Hill Rise, Richmond.
BAKER, HENRY THOMAS GEORGE..	18, Stanley Villas, Wallington.
BATES, OSCAR GEORGE	Montague House, Montague Road, Croydon.
BATES, PERCY	354, London Road, Thornton Heath.
BENNETT, SYDNEY	Eagle Chambers, Kingston-on-Thames.
BINNS, MAURICE ALFRED	Fairburn, St. Augustine's Avenue, S. Croydon.
BRAY, JOCELYN	Coast Bank, Westcott, Dorking.
BRENT, THOMAS	c/o Messrs. Chesterton and Sons, The Norbury Manor Estate Office, London Road, Norbury, S.W.
BRIGHTEN, CLAUDE WILLIAM ..	Ockham, Ripley.
BROMLEY, ALAN	Borough Surveyor's Office, Croydon.
BRUZAUD, GEORGE JOSEPH	Highfield End, West Byfleet.
BUDGEN, WILLIAM HAROLD.. ..	Rosemead, Croham Road, South Croydon.
BULLOCK, BURNETT.. ..	49, Whitford Gardens, Mitcham.

CHART, STEPHEN	Greenview, Mitcham.
CLARKE, ROBERT	15, Selwyn Avenue, Richmond.
COLLINS, JAMES STANLEY	Collinwood, Purley Knoll, Purley.
COLLARD, PERCY WILLIAM	9, Wolverton Avenue, Kingston Hill.
CROW, FREDERICK LEWIS, JUN. ..	Shellwood Manor, Leigh.
CULVER, HERBERT GEORGE	Heron House, Richmond.
DASH, ROYDON ENGLEFIELD	
ASHFORD	Englefield, Oxshott.
DEANE, HARRY CUTHBERT, JUN. ..	Hazelhurst, Worcester Park.
DE CETTO, HENRY	Oakleigh, Chart Lane, Reigate.
DELL, JOSEPH WILLIAMS	17, Wolseley Road, Godalming.
DENSHAM, JOHN BOON	Foxley, Purley.
DURDEN, STANLEY JOHN	28, Woodville Road, Thornton Heath.
DUTTON, JOSEPH	Comerford, Park Lane, Wallington.
GARDNER, JAMES	29, Grosvenor Road, Richmond.
GATES, ERNEST HARRY	49, Leander Road, London Road, Thorn- ton Heath.
GLENN, GEORGE FREDERICK	West Byfleet.
GOSNEY, STANLEY HARRY	44, Addiscombe Road, Croydon.
GRANT, JOSEPH	16, Addiscombe Road, Croydon.
GRELLIER, GORDON HARLEY	Epsom.
HARDWICK, ARTHUR JESSOP	Eagle Chambers, Kingston-on-Thames.
HARRIS, HORACE SAMUEL	Ronietta, St. James' Road, Sutton.
HAY, PERCY GILBERT	Totland, Clifton Road, Wallington.
HEWETT, RICHARD	Bridge Street, Guildford.
HIGHWAY, EVON	Sandpit Lodge, Chobham.
HUNT, HERBERT CHARLES	12, Lion Gate Gardens, Richmond.
IBBETSON, THOMAS HENRY	Melbourne, Kendall Avenue, Sanderstead.
IBBOTSON, WILLIAM BYROM	Sypsies, Ember Lane, Esher.
JARVIS, ERNEST CORY	The Stone Hut, Purley.
JECKELLS, WILLIAM AUGUSTUS ..	Kewhurst, Avenue Road, Wallington.
JENNINGS, WALTER HENRY	Bemvinda, Queen's Road, Kingston Hill.
JESSETT, CHARLES EDWARD	
VERNON	100, South End, Croydon.
JONES, LEWIS FAREWELL	Brenley, Mitcham.
KENNARD, ALFRED JAMES	57, The Crescent, Croydon.
KENNARD, FREDERICK HARRISON	40, Heathfield Road, South Croydon.
LAMBERT, ARTHUR PEPLOE	Trenton, Benhill Road, Sutton.
LAWS, SIDNEY BUSH	Brincliffe, Holland Road, Sutton.
LEE, ALEXANDER VICTOR	143, High Street, Guildford.
LEE, NORMAN ALFRED	Coombe Hurst, Wallington.
MACE, CHARLES MARRINER	Umerleigh, Willoughby Road, Kingston- on-Thames.
MAIDES, PERCY THOMAS	Homestead, Morland Road, Croydon.
MANN, FREDERICK CHARLES	
THOMAS	Woking.
MAW, PERCIVAL TRENTHAM	Holmesdale, Nutfield.
MEARS, JOHN ARTHUR	49, Eden Street, Kingston-on-Thames.

MENZIES, WILLIAM KENNETH ..	Golspie, Englefield Green.
MEW, ROBERT HEATH	Dudley House, Ladbroke Road, Redhill.
MITCHELL, SIDNEY	c/o Charles Osenton, Station Road, Ashstead.
MOLYNEUX, HERBERT ERNEST ..	Brantwood, Riddlesdown Road, Purley.
MOORE, ARTHUR WILLIAM	Croydon Road, Caterham Valley.
MORGAN, RICHARD CROKE, B.A. ..	Buckland, Waterden Road, Guildford.
PAICE, WILLIAM, JUN.	Wentworth Cottage, Virginia Water.
PALMER, SIDNEY	Glen-eyre, Church Walk, Thames Ditton.
PARKER, CHARLES GOODE	Howarth, Banstead Road, Belmont.
PAXTON, ARCHIBALD PHILIP.. ..	14, Grand Parade, Coombe Lane, Kingston-on-Thames.
PEAT, FREDERICK JAMES	Valuer's Department, Reigate Hill, Reigate.
PETERS, GEORGE FARMER JAMES..	The Railway Station, Byfleet.
POPE, HERBERT BURGHAM	Thames Bank House, Lower Ham Road, Kingston-on-Thames.
POWER, PERCY TOMES	Egham.
PRESTON, ERIC WATSON.. ..	Curlew Hope, Weybridge.
PRIOR, ARTHUR SPARKS.. ..	101, Park Road, Norbiton.
PULFORD, LEONARD CYRIL	The Cedars, Addiscombe.
REEVE, GARNET NORMAN	Springfield Lodge, Dean Road, Croydon.
ROBINSON, FRANCIS WALTER.. ..	30, Halford Road, Richmond.
ROFF, HENRY GRIFFITHS	34, Carew Road, Thornton Heath.
ROGERS, LEONARD SAMUEL	Aberglaslyn, Birdhurst Rise, Croydon.
ROWLAND, HAROLD EVANS	2, Station Approach, Purley.
RUDLER, FREDERICK GEORGE ..	Piercefield, Ennerdale Road, Richmond.
RUTLEY, ARTHUR DENNETT	Norcot, Oxted.
SCORER, ALFRED GEORGE	Hillcrest, Chilworth, Guildford.
SEALE, PERCY JAMES	Estate Offices, Oxted.
SHEARBURN, WILLIAM IVERY.. ..	Roseneath, Dorking.
SHEPHERD, EDMUND THOMAS.. ..	Guildford Street, Chertsey.
SHOTTON, JOHN SIDWELL	9, South Park Hill, Croydon.
SHROSBREE, ALBERT DE BOIS.. ..	Valuer's Office, 16, St. Mark's Hill, Surbiton.
SNODGRASS, REGINALD, A.M.I.C.E..	Tunsgate, Guildford.
STACEY, MICHAEL BEDE.. ..	Old Bank, Reigate.
STAMFORD, ALFRED ARTHUR	32, Alric Avenue, New Malden.
STAMPER, THOMAS HENRY GILBORN	Bookham.
STANLEY, OWEN GEOFFREY	McDonald Lodge, Lightwater, Camberley.
STEDMAN, CHARLES FREDERICK ..	Richmond House, Cranleigh.
STEWART, HARRY S.	Clarewood, Limpsfield.
STONE, CYRIL FRANK	Stenfur, Furzefield Crescent, Reigate.
STUBINGTON, ROBERT ALAN	Slades, Bramley.
SUMMERFIELD, HORACE.. ..	1, Bury Street, Guildford.
TAYLOR, ARTHUR BRASSEY	Ingestre, Sheen Road, Richmond.
THOMAS, FREDERICK CHARLES ..	Tanita, Vale Road, Claygate.

CHOMPSON, NEWTON DUKINFIELD ..	Caterham Valley.
TURNER, EDGAR PASSAND	15, Canning Road, Croydon.
MAGSTAFF, FREDERICK HOWARD ..	16, Elmwood Road, Croydon.
WATKINS, HAROLD ALFRED	188, Kew Road, Richmond.
WEEKES, CYRIL SWAFFER	Estate Offices, Guildford.
WEGUELIN, JOHN DAVID REECE ..	Streathbourne, Smallfields, Horley.
WHEELER, LEONARD CHARLES ..	Cwm Dale, Cobham.
WHITE, WILLIAM HENRY PERCY ..	8, St. Leonard's Road, Surbiton.
WICKER, JOHN OWEN	2, Westcroft Road, Carshalton.
WIDDOWSON, GEORGE CLIFFORD ..	14, Rosemont Road, Richmond Hill.
NIGHTMAN, WILLIAM OSBORNE ..	Lynton, Dornton Road, South Croydon.
WILLIAMS, FRANK WARREN	Magnolia, Ennismore Avenue, Guildford.
WILLIAMS, WILLIAM WELSBY ..	Farnham.
VILLOUGHBY, FRANK	Estate Office, Merstham.
WORDSWORTH, CHRISTOPHER ..	Brooklands, South Godstone.
WORTHINGTON, JAMES SCOTT ..	5, Lichfield Gardens, Richmond.
YEWDALE, FRANCIS EDWARD ..	28, Defoe Avenue, Kew Gardens.
YOUNG, KENNETH JAMES	Moree, Coombe Road, South Croydon.

ASSOCIATES :

BOULGER, GEORGE EDWARD	
SIMONDS	11, Onslow Road, Richmond.
SETH-SMITH, ARCHIBALD	Silvermere, Cobham.
VAUGHAN, EDWARD JOSEPH ..	Focklesbrook, Chobham.
WILLIAMS, WILLIAM LYMINGTON ..	Portley, Caterham.

SUSSEX.

(Sussex Committee.)

FELLOWS :

BANNISTER, THOMAS	Limehurst, Hayward's Heath.
BASLEY, HAROLD PULLAM	163, North Street, Brighton.
BOWLEY, JOHN CROSS	25, Hyde Gardens, Eastbourne.
BURTENSHAW, ALBERT	Hailsham.
BURTENSHAW, ALBERT KING ..	Hailsham.
CHASEMORE, PHILIP	Ashleigh, Horsham.
COLGATE, THOMAS	Tide Mill House, Bishopstone, Lewes.
CULVERHOUSE, CECIL GOLDAR	
FEARN	25, Gloucester Place, Brighton.
DENNISON, JOHN W., F.R.I.B.A. ..	28, Upperton Gardens, Eastbourne.
DOLL, OTTO SIGISMUND	157, North Street, Brighton.

DRAY, ALFRED.. .. .	30, Havelock Road, Hastings.
DYER, FREDERICK BURFIELD.. ..	Harlaxton, Bigwood Avenue, Hove.
GARDNER, GILBERT.. .. .	Crawley.
GIBBON, WILLIAM JACOMB, A.R.I.B.A.	The Oaks, Burgess Hill.
GREEN, ARTHUR EDWARD	Inland Revenue, Weimar House, Chichester.
HOBGEN, FRANCIS NEALE	East Street, Chichester.
HOBGEN, THOMAS CECIL.. .. .	Highleigh, Sidlesham, near Chichester.
HOWARD, HARRY	Town Offices, Littlehampton.
*INGRAM, WALTER FEILDE	2, St. Andrew's Place, Lewes.
KILLICK, ANTHONY EDWARD.. ..	Terminus Road, Eastbourne.
KING, FRANK HULME	Horsham.
MARTIN, JOHN PATTINSON	63, High Street, Lewes.
MITCHELL, GEORGE SHARMAN	Broadbridge Place, Horsham.
OGILVIE, ROBERT MATHEWSON	Hayward's Heath.
OVERTON, WILLIAM HENRY	22, Ship Street, Brighton.
PARRIS, CHARLES JOHN	Beechwood, Crowborough.
PARSONS, FREDERICK CECIL	163, North Street, Brighton.
POWELL, HUBERT JOHN.. .. .	Hill Lodge, Lewes.
*POWELL, REGINALD HENRY	Estate Office, Lewes.
REEVE, KINGSNORTH	27, High Street, Rye.
SEDGWICK, ALFRED SYDNEY EDWARD	31, Warwick Street, Worthing.
SHERRIN, JOHN LESTER	Iona, Eastbourne.
SMITH, SIDNEY	Southwater, Horsham.
TAYLOR, JOHN HERBERT	Turner's Hill.
TAYLOR, MATTHEW	Chiddingfold, Godalming, Surrey.
TURNER, CHARLES	Oakhurst, East Grinstead.
WALFORD, EDWARD	Colenso Villa, Portland Rd., East Grinstead.
WARR, GEORGE WALTER.. .. .	Town Hall, Southwick.
WATERS, WILLIAM RICHARD	Highfield, Dyke Road Drive, Brighton.
WATSON, JAMES BRUCE.. .. .	Petworth.
WELCH, FREDERICK WILLIAM	170, North Street, Brighton, and 30A, Western Road, Hove.
WILKINSON, THOMAS	170, North Street, Brighton, and 30A, Western Road, Hove.
WOOD, LESLIE STUART	East Grinstead.
WYATT, HERBERT GUY BUCKELL.. ..	Elmhurst, Summersdale, Chichester.
WYATT, OLIVER NEWMAN	East Street, Chichester.

PROFESSIONAL ASSOCIATES :

ANDREW, ROBERT CHARLES, N.D.A.	Agricultural College, Uckfield.
BANNISTER, MONTAGU DOUGLAS ..	Buntinghill, Cuckfield.
BEALE, DONALD OLAF CHRISTOPHER	Uckfield
BEAUMONT, RAYMOND PILBEAM ..	2, Richmond Terrace, Brighton.

BENTON, GERALD SYDNEY	Messrs.Hill & Co., 192, Church Road, Hove.
BISLEY, CLAUDE VIVIAN	Redriffe, Avondale Road, Hove.
BLABER, MONTAGUE	Hailsham.
BURSTOW, RALPH HENRY	46, Station Road, Bexhill-on-Sea.
CALF, GEORGE STUART	Mill Lodge, Seaford, and Terminus, Buildings, Seaford.
CALLOW, CLAYTON HAROLD	71, London Road, St. Leonards-on-Sea.
CARD, HENRY	North Street, Lewes.
CARPENTER, ROBERT HENRY	Lyndhurst, Burgess Hill.
CARR, CHARLES WATSON	24, High Street, Eastbourne.
CARRINGTON, HAROLD EDWARD	Valuer's Office, Weimar House, West- gate, Chichester.
CHASEMORE, ALEC	Ashleigh, Horsham.
CHILD, CHARLES	Slinfold, near Horsham.
CLITCHING, GEORGE FREDERICK	26, Chapel Road, Worthing.
COX, REGINALD JOHN	20, Preston Street, Brighton.
CROFT, GEORGE HERBERT	10, Sussex Square, Brighton.
DIBDIN, ROBERT JOHN	Nobles, Dormansland, East Grinstead.
EDWARDS, GEORGE PERCY	14, Whyke Road, Chichester.
ELLIOTT, JOHN WILLIAM FARRANT	1, Holland Road, Hove, Brighton.
GIBSON, ALEXANDER WILLIAM	7, Warwick Place, Worthing, and 2, Railway Approach, Worthing.
GILL, WILLIAM PHILIP	35, Stanford Road, Brighton.
GAGGER, GEORGE JOHN	Railway Approach, Worthing.
GALL, RODERICK GLENDINNING	84, Victoria Drive, Eastbourne.
GARDIMAN, HARRY	59, Mount Pleasant Road, Hastings.
GIGGS, KENNETH ALAN	Wickham, Hayward's Heath.
HODGSON, ARCHIBALD SANFORD	Weston's Place, Warnham.
HODSON, ANTHONY GEORGE	Kingston, near Lewes.
HOLMAN, LUTHER MARTIN	Brooklyn, Ditchling Road, Brighton.
HUTCHINGS, ALAN	Sutton Estate Office, Seaford.
LEWIS, JOHN	Valuer's Office, Westgate, Chichester.
LOWDEN, ANDREW	Estate Office, Roffey Park, Horsham.
LUCAS, JOHN CLAY	Castle Precincts, Lewes.
MELLOR, JAMES FREDERICK	110, St. James's Street, Brighton.
MILLER, GEORGE FREDERICK	Town Hall, Hastings.
MITCHELL, HERBERT ARTHUR	40, Ship Street, Brighton.
NEWINGTON, CALEB RICKMAN K.	County Hall, Lewes.
NYE, HAYDN PERCIVAL	25, Gloucester Place, Brighton.
PARKS, WALTER	17, Holmesdale Gardens, Hastings.
PATCHING, EDWARD GLENCALRN	46, London Road, East Grinstead.
PEARCE, WILLIAM HENRY, A.M.I.C.E.	4, Southcourt Road, Worthing.
PEIRCE, RICHARD GEORGE	24, Stafford Road, Brighton.
ROBBINS, WALTER FRANCIS	Crawley.
ROOME, FRANK MORRIS	13, St. Martin's Street, Chichester.
RUSS, ERNEST	25, Gloucester Place, Brighton.
ST. AUBYN, BELVILLE MOLES- WORTH, B.A. (Oxon.)	Stopham Estate Office, Toat, Pulborough.

SAUNDERS, LESLIE	32, Upper Rock Gardens, Brighton.
SMITH, GEORGE STUART ST. JOHN	Ivy House, High Street, Uckfield.
STEVENS, BENJAMIN	Heathcote, Little Common Road, Bexhill on-Sea.
STRIDE, WALTER OSBORN	Messrs. Stride and Son, 63, East Street Chichester.
TUCKER, ARTHUR HAINES	Capital and Counties Bank, Steyning, and 26, Chapel Road, Worthing.
UDNY, AUGUSTUS CHARLES	142, Springfield Road, Brighton.
UPTON, THOMAS HERBERT	Grays, Petworth.
WEST, SIDNEY HERBERT	North House, Portslade.
WHEELER, PERCY HARRISKINE ..	Easebourne, Midhurst.
WICKENDEN, ERNEST	15 Moscow Road, Clive Vale, Hastings.
WOODHAMS, JAMES PERCY	51, Priory Avenue, Hastings.
WOOLNOUGH, JOHN WILLIAM ..	6, Vicarage Drive, Eastbourne.
YOUNG, SIDNEY	Redholme, The Wallands, Lewes.

ASSOCIATES :

CANTELL, MARK TAYLOR	Municipal Technical College, Brighton.
MALDEN, WALTER JAMES	Etchingham.
WARREN, REGINALD AUGUSTUS ..	Preston Place, Worthing.

WARWICKSHIRE.

(Warwick and Worcester Committee.)

FELLOWS :

*BETTRIDGE, EDWARD	28, Waterloo Street, Birmingham.
*BOLAM, CHARLES GODFREY	Dunchurch, Rugby.
BURNETT, JOHN	Gopsall, Atherstone.
CAMPBELL, HUGH BRUCE	Brooklands, Leamington.
CAVE, HENRY H.	Estate Office, Rugby.
COUCHMAN, ROBERT EDWARD ..	35, Paradise Street, Birmingham.
DAWSON, GEORGE CROSBIE	19, Priory Row, Coventry.
DEER, EDWARD	Stratford-on-Avon.
EAYRS, JOHN THOMAS, M.I.C.E. ..	Clarence Chambers, Corporation Street, Birmingham.
EVANS, WALTER PEARSON	19, Priory Row, Coventry.
FAYERMAN, GEORGE METCALFE ..	57, The Parade, Leamington.
FISHER, THOMAS GEORGE	18, Bennett's Hill, Birmingham.
FOWLER, GERARD EDMUND	Colmore House, 21, Waterloo Street, Bir- mingham.
FOWLER, HENRY	6, Waterloo Street, Birmingham.
*FOWLER, RICHARD	118, Colmore Row, Birmingham.
FOWLER, WILLIAM	69, Temple Row, Birmingham.
*GILPIN-BROWN, WILLIAM DUNDAS	Estate Office, Stoneleigh Abbey, Kenil- worth.

GRIMLEY, THOMAS	40, Temple Street, Birmingham.
ADLEY, FRANK	18, Bennett's Hill, Birmingham.
HARRIS, ARNOLD ELSMERE	117, Colmore Road, Birmingham.
HARRISON, FREDERICK	District Valuer, Union Street Chambers, Coventry.
HENDRIKS, HENRY	61, Temple Row, Birmingham.
HUTCHINGS, WILLIAM ARTHUR	The Hollies, Sutton Coldfield.
HENKINS, OSWALD	24, Rectory Road, Sutton Coldfield.
HONES, URWICK MEREDITH	Clyro, Upland Road, Selly Park, Birmingham.
HENWRICK, GEORGE	83, Colmore Row, Birmingham.
HAKIN-SMITH, ERNEST	Colmore House, 21, Waterloo Street, Birmingham.
HOBAN, GUSTAVUS TAYLOR	18, Bennett's Hill, Birmingham.
HUDLOW, COLONEL WALTER ROBERT, C.B.	Dorridge, Knowle, and 19, Temple Street, Birmingham.
HASON, WILLIAM ARTHUR	31A, Colmore Row, Birmingham.
HATHEWS, LEWIS OSLER, M.A. (<i>Cantab.</i>)	12, Waterloo Street, Birmingham.
HAIN, GEORGE LLOYD	44, Russell Terrace, Leamington.
HEARSE, OCTAVIUS BURROUGHS	Hill Side, Nuneaton.
HINNEY, FREDERICK WYLDBORE DIGBY	6, Waterloo Street, Birmingham.
RAIKES, COLONEL GEORGE WHITTINGTON	Ragley Estate Office, Alcester.
RODRICK, JOHN	2, Temple Row West, Birmingham.
RHITH, FRANK	104, Colmore Row, Birmingham.
RHITH, FRANK WILLIAM	Beauchamp Hill, Milverton, Leamington.
ROUTHORN, CHARLES HERBERT	38, The Parade, Leamington Spa.
REMLETT, WALTER WILLIAM	Ansley Hall Estate Office, Hartshill, Atherstone.
RYPE, MARCUS OSWALD	87, Edmund Street, Birmingham.
WILLIAMS, EDWARD BICKERTON	57, Colmore Row, Birmingham.
WILLMOT, GEORGE DYOTT	6, Waterloo Street, Birmingham.
WILLMOT, JOHN	6, Waterloo Street, Birmingham.

PROFESSIONAL ASSOCIATES :

ARMSTRONG, JOHN WILLIAM WILSON	Blacon, Stratford-on-Avon.
ASH, HORACE JAMES, A.R.I.B.A.	12, Market Place, Nuneaton.
ATTENBOROUGH, GEORGE	519, Moseley Road, Birmingham.
AYLIS, ALFRED WILLIAM	41, Clarence Road, Moseley, Birmingham.
BEECH, ARCHIBALD WILLIAM HICKS, MAJOR	Eathorpe Hall, Leamington.
BRIGWOOD, ERNEST GUY	158, Edmund Street, Birmingham.
BRADLEY, BENJAMIN	Norwich Union Buildings, Edmund Street, Birmingham.

BROCKHURST, HAROLD CECIL.. ..	Room 11, 18, Steelhouse Lane, Birmingham.
BRYAN, ARTHUR	Minworth Hall, near Birmingham.
BUTLER, ARTHUR STANLEY	24, Bennett's Hill, Birmingham.
COOK, FREDERICK CHARLES	Council Offices, Nuneaton.
DEAKIN, FRANCIS HENRY	Fieldhead, Wesley Park Road, Selly Oak Birmingham.
DRIVER, JOHN ROBERT FARRANT ..	18, Bennett's Hill, Birmingham.
FAYERMAN, ALEC GEORGE PERCY ..	Hillside, Kenilworth.
FENSOM, REGINALD ROBERT.. ..	Masonic Buildings, Little Park Street, Coventry.
FLOYD, ARTHUR NOEL	Rydal Mount, Handsworth Wood, Bir- mingham.
GODFREY-PAYTON, ARTHUR	Bridge House, Warwick.
GODFREY-PAYTON, WALTER	The Bridge House, Warwick.
GURNEY, SIDNEY JOHN	39, Kingsbury Road, Gravelly Hill, Birmingham.
HEDLEY, REGINALD THOMAS FENWICK	31a, Colmore Row, Birmingham.
HEWITT, ARTHUR CECIL.. .. .	43, All Saints' Road, King's Heath, Bir- mingham.
HINGLEY, JOSEPH BLOOMER.. ..	Inglenook, Lutterworth Road, Attles- borough, Nuneaton.
HIPSLEY, FREDERIC WILLIAM	156, South Road, Erdington, Birmingham.
HOLBECH, NIGEL LAURENCE	21, Bennett's Hill, Birmingham.
HOLBECH, ROBERT CECIL	18, Bennett's Hill, Birmingham.
HOLROYD, JOHN OTHIC	480, Gillott Road, Edgbaston, Birming- ham.
JOHNSON, HERBERT THOMAS.. ..	Meersbrook, Elsee Road, Rugby.
LINDSAY, CHARLES ALLEN	Dunchurch, Rugby.
MATHEWS, HUGH SPENCER	12, Waterloo Street, Birmingham.
NUTTING, JOHN NAUNTON	Rosedale Villa, Lower Hillmorton Road, Rugby.
PARSONS, ARTHUR STANLEY	4, Hillaries Road, Gravelly Hill, Erdington.
PERKINS, JOSEPH	86, Willows Road, Balsall Heath, Bir- mingham.
PHILLIPS, SYDNEY VERNON	The Cottage, Yardley Wood Road, Moseley, Birmingham.
PINSON, GILBERT	Cobden Buildings, Corporation Street, Birmingham.
PRIEST, ALBERT EDWARD	Temple Courts, 55, Temple Row, Bir- mingham.
REDFERN, CHARLES FREDERICK ..	Whitehall Chambers, 23, Colmore Row, Birmingham.
RICHARDS, ROBERT HERBERT	Estate Office, Canwell, Sutton Coldfield.
SMITH, GEORGE	Chilvers Coton, Nuneaton.
STAFFORD, JAMES NEILSON GREEN- LEES	206, Bristol Road, Edgbaston, Bir- mingham.

STEEDS, HERBERT EUSTACE	c/o R. E. Couchman, 35, Paradise Street, Birmingham.
STOPHER, GEORGE	117, York Road, King's Heath, Birmingham.
TAYLOR, FRANK GEOFFREY	399, Hagley Road, Edgbaston, Birmingham.
TURNER, ALBURY CHARLES	52, Manor Court Road, Nuneaton.
WEBB, ROBERT DUNCAN	Valuer's Department, 18, Bennett's Hill, Birmingham.
WHITLOCK, FRANCIS JOHN	The Mart, Bank Street, Rugby.
WILLIAMS, CHARLES	Valuation Department, Inland Revenue, Coventry.

WESTMORLAND.

(Cumberland and Westmorland Committee.)

FELLOWS :

BANKS, JOHN	Kendal.
FULTON, EDWIN ALEXANDER ..	Estate Office, Sedgwick, near Kendal.
HOGGARTH, ARTHUR	Kendal.
PUNCHARD, FREDERICK BURT ..	Fairbank, Kirkby Lonsdale.

PROFESSIONAL ASSOCIATES :

HOGGARTH, LAWRENCE STEELE ..	St. Abbs, Kendal.
JACKSON, EDWARD HENRY	Windermere Buildings, Windermere.
STRATHERN, TOM DALRYMPLE ..	Grimes Hill Estate Office, Middleton, Kirkby Lonsdale.

WILTSHIRE (NORTHERN PART).

(Somerset, Gloucester, and North Wilts Committee.)

FELLOWS :

BISHOP, CHARLES	Regent Circus, Swindon.
BRINKWORTH, ROBERT EDWIN ..	Chippenham.
HERRIS, GEORGE	Milton Manor, Pewsey.
MURMEDGE, JOHN HARRIS	Estate Office, Lucknam, Chippenham.
COOPER, ALFRED EGBERT	10, High Street, Marlborough.
JEANS, MARK	Marlborough.
MARSHALL, LIONEL HASLER	Chippenham.
OUNDY, HERBERT	Manvers Street, Trowbridge.
HAITH, CYRIL HERBERT	Chippenham.
HAITH, HENRY HERBERT	Bowood, Calne.
ATKINS, ROBERT ARUNDEL	Castle Combe, Chippenham.

PROFESSIONAL ASSOCIATES :

DAVIES, RHYS WILTSHIRE	37, Regent Circus, Swindon.
FOGG, THOMAS HOLT	7, Market Place, Chippenham.
HARRISON, HENRY BEAUCHAMP ..	Sutton Benger, Chippenham.
KEELEY, CECIL JOHN HARVEY ..	The Osprey, Bowood, Calne.
KNUBLEY, MILES PONSONBY ..	Steeple Ashton Vicarage, Trowbridge.
LAVINGTON, THOMAS HENRY RUSS	Poulton House, Marlborough.
LEES, RANDLE BURSLAM	Woodside, Bradford-on-Avon.
PUCKRIDGE, PERCIVAL MARTIN ..	Milton, Pewsey.
STANLEY, GERALD	Sunny Croft, Trowbridge.
SNAILUM, WALTER WADMAN ..	Church Street, and Wingfield Road, Trowbridge.

WILTSHIRE (SOUTHERN PART).

(Hampshire, Dorset, and South Wilts Committee.)

FELLOWS :

BATH, FRED, F.R.I.B.A.	Crown Chambers and Sandown House, Church Fields, Salisbury.
*CANNING, WILLIAM BROWNE ..	Salisbury.
CHILD, HENRY JOHN, MAJOR ..	Royal Engineer Office, Tidworth.
*GATER, CALEB WILLIAM	Salisbury.
NEWBERY, REGINALD ALFRED ..	Estate Office, Berwick St. James, Salis- bury.
OLIPHANT, GEORGE A. J.	The Grange, Shrewton.
RAVES, BERTRAM ADAMS, MAJOR, A.M.I.C.E.	Royal Engineer Office, Salisbury.
*RAWLENCE, ERNEST ALFRED ..	Newlands, Salisbury.
RAWLENCE, JAMES EDWARD ..	The Canal, Salisbury.
RIGDEN, FRANCIS	Salisbury.
SHORT, ERNEST WILLIAM GEORGE	Royal Engineer Office, "C" Lines, Bulford Camp, Salisbury.
*SQUAREY, NEWELL WILLIAM PITTS	Bemerton, Salisbury.
WATERS, EDWARD	The Canal, Salisbury.
WILBRAHAM, EDWARD SIDNEY ..	Estate Office, St. Giles, Salisbury.
WOOLLEY, JOHN TURTON	The Castle Auction Mart, Salisbury.

PROFESSIONAL ASSOCIATES :

BISHOP, HORACE STANLEY CHARLES	The Laurels, East Harnham, Salisbury.
DAVENPORT, GILBERT CAPELL ..	Damerham, Salisbury.
HALE, FRANCIS EDWARD	52, Fisherton Street, Salisbury.

KENNAWAY, ARTHUR LEWIS.. ..	Heytesbury.
MOODY, HERBERT LINE.. ..	8, Harcourt Terrace, Salisbury.
RAWLENCE, DUNCAN ALFRED ..	Newlands, London Road, Salisbury.
RAWLENCE, GEORGE NORMAN ..	Newlands, London Road, Salisbury.
WILLIAMS, DAVID	44, Elm Grove Road, Salisbury.
WOOLLEY, RICHARD MELSOME ..	Salisbury.

WORCESTERSHIRE.

(Warwick and Worcester Committee.)

FELLOWS:

ALLSEBROOK, ARTHUR, B.SC. (<i>Edin.</i>)	Link Elm, Malvern Link.
BUCK, HERBERT WILSON'	Pierpoint Street, Worcester.
CHAMBERLAIN, GEORGE ARTHUR RADDON	Whitegates, Enville, near Stourbridge.
CHICHESTER, RICHARD HERBERT ..	Upton-on-Severn.
EDMONDS, JOHN NITCHELL	Wood Farm, Malvern Wells.
EVERY-CLAYTON, REGINALD ARTHUR ERIC	Blackmore Park Estate Office, Hanley Swan, near Worcester.
FIDDIAN, WILLIAM.. ..	Old Bank Offices, Stourbridge.
GROVE, ALBERT	1, Parkfield Terrace, Stourbridge.
JOSELAND, CHARLES	Bank Buildings, Kidderminster.
KING, HENRY	Stourbridge.
PEARSON, T. HOWARD	Lindridge, Tenbury.
RIGHTON, EDWARD GRANTHAM ..	High Street, Evesham.
SMITH, WILLIAM	Upper Farm, Abbot's Salford, Evesham.
STALLARD, WILLIAM	St. John's House, St. John's, Worcester, and Worcester Chambers, Worcester.

PROFESSIONAL ASSOCIATES:

BALLARD, WILLIAM EDGAR, A.M.I.C.E.	Engineer and Surveyor's Office, 23 and 25, Valentine Road, King's Heath.
BARRATT, HARRY	Hill View, Corser Street, Stourbridge.
JOHNSON, CLIFFORD NOEL	19, Priory Street, Dudley.
LYDDON, ALFRED JONATHAN, A.M.I.C.E.	King's Norton and Northfield U.D.C. Surveyor's Department, 23, Valentine Road, King's Heath.
MEACHER, EDMOND.. ..	Worcester Chambers, Pierpoint Street, Worcester.
MINORS, ERNEST, B.SC. (<i>Lond.</i>) A.M.I.C.E.	City Engineer's Office, Guildhall, Wor- cester.

RANSOM, WILLIAM	The Mount, 81, Bath Road, Worcester, and City Engineer's Office, Guildhall, Worcester.
ROWE, ALFRED VERNON	Worcester Chambers, Worcester.
SHUTTLEWORTH-KING, CHARLES JOHN	St. Clement's House, Worcester.
TURNER, JOSCELIN MAITLAND ..	c.o. T. R. Hulbert, Dumbleton, Evesham.
WALL, JOHN ERNEST	Rosehurst, Bath Road, Worcester.
WEAVER, HENRY PERCIVAL FRANCIS	Lye, Stourbridge.

ASSOCIATE :

BLACKSHAW, JOHN FRANK	The Cottage, Bromsgrove.
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YORKSHIRE.

(Yorkshire Committee.)

FELLOWS :

ABBEY, JOE BURMAN, A.M.I.C.E.	34A, New Street, Huddersfield.
*ABBOTT, ROBERT THOMAS G. ..	Whitley House, Malton.
AMBLER, SYDNEY WOOD	Estate Office, Sandbeck Park, Tickhill, near Rotherham.
*ARMISTEAD, RICHARD, A.M.I.C.E. ..	10, Booth Street, Bradford.
ARMYTAGE, SIR GEORGE, BART...	Kirklees, Brighouse.
BILSON, JOHN, F.R.I.B.A.	23, Parliament Street, Hull.
BRAMLEY, FRANCIS HERBERT ..	The White Building, Fitzalan Square, Sheffield.
BROADBENT, WILLIAM	Red Hall Chambers, Guildford Street, Leeds.
BROCKLEBANK, JOHN	Todmorden.
BRODRICK, FREDERICK STEAD ..	York Chambers, Lowgate, Hull.
BROSTER, ROBERT BUCK	Craven Bank Chambers, North Street, Keighley.
BUCKLEY, GEORGE	Tower Chambers, Halifax
BUTLER, CHARLES	18, Queen Street, Huddersfield.
CLARE, EDWARD LOVELL	37, Park Square, Leeds.
CLARKE, CHRISTOPHER	Charlcot, Bedale.
CLARKE, JOHN WILLIAM	Guisborough.
COVERDALE, HENRY	The Duke of Norfolk's Estate Office, Sheffield.
COWGILL, BRIAN BOLLANS HIRD ..	13A, Piece Hall Yard, Bradford.
COX, ARTHUR LAURENCE	45, Darley Street, Bradford.
*COX, EDWARD SAMUEL	3, New Street, York.
CRABTREE, PERCY	District Valuer's Office, York Buildings, Commercial Street, Halifax.
DEMETRIADI, THOMAS MARSDEN ..	28, John William Street, Huddersfield.

DENTON, WILLIAM	Montgomery Chambers, Hartshead, Sheffield.
DOUGLAS, ARTHUR HUGH	Eden House, Malton, Yorkshire.
EVANS, WILLIAM, A.M.I.C.E.	New Walk, Beverley.
*FARRER, JOHN	Oulton, near Leeds.
FIRTH, HARRISS	Valuation Department, Inland Revenue, Basinghall Street, Leeds.
FORBES, CHARLES MANSFELDT ..	14, New Street, York.
FOWLER, FREDERICK	St. James' Street, Sheffield.
FOWLER, REGINALD WILLIAM ..	3, Hartshead, Sheffield.
FOX, CHARLES EDWARD	7, Rawson Street, Halifax.
*FOX, CHARLES JAMES	7, Rawson Street, Halifax.
FRANCE, ARTHUR ALDERSON ..	99, Swan Arcade, Bradford.
FRYER, GEORGE	5, Caroline Place, Hull.
GELDER, SIR WILLIAM ALFRED, M.P., F.R.I.B.A.	76, Lowgate, Hull.
GODDING, FRANK HORATIO	Valuation Department, Inland Revenue, South Parade, Northallerton.
GOTT, CHARLES HENRY, M.I.C.E. . .	1 Parkfield Road, Manningham, Bradford.
*GOTT, FRANK	3, East Parade, Leeds.
GREENWOOD, JOSEPH, MAJOR ..	Headquarter Offices, Northern Command, York.
HANSON, HAROLD, A.M.I.C.E. . .	11, Cloth Hall Street, Huddersfield.
*HANSON, JOHN HENRY, A.M.I.C.E.	11, Cloth Hall Street, Huddersfield.
HARLAND, HENRY CHAPMAN ..	Bellevue Grove, Grove Hill, Middlesbrough.
HEBBLETHWAITE, LOUIS	Custom House Buildings, Whitefriargate, Hull.
*HEPPER, JOHN	East Parade, Leeds.
HORSFALL, RICHARD EDGAR ..	22A, Commercial Street, Halifax.
KELLY, JOHN GEORGE	West View, Pontefract.
KIRKBY, REGINALD GUY	32, John William Street, Huddersfield.
*LEATHER, GEORGE HERBERT ..	North British Buildings, East Parade, Leeds.
LEATHER, WILLIAM BEAUMONT ..	The Hollies, Leeds.
LOFTHOUSE, ALBERT WILSON ..	Woodcroft, Marton, S.O., and 129, Albert Road, Middlesbrough.
MARSHALL, PETER	3, Hartshead, Sheffield.
MASSIE, FRANK, M.I.C.E.	Tetley House, Kirkgate, Wakefield.
NEILL, JAMES NEILL	38, Park Row, Leeds.
PEIRSON, GEORGE BRODRICK ..	Baldersby, S.O.
PETCH, JOHN STONEHOUSE	Estate Office, Broughton, Skipton.
POPPLE, JOHN	19, St. Hilda's Terrace, Whitby.
RENTON, GEORGE	3, Princes Square, Harrogate.
SAMPSON, WILLIAM	Beauchief Abbey, near Sheffield.
SANDFORD, CHARLES SIDNEY ..	16, St. James Row, Sheffield.
SILCOCK, EDWARD JOHN, M.I.C.E. . .	10, Park Row, Leeds.

SMITH, ARTHUR TELFORD	15, Cheapside, Bradford.
SMITH, HARRY RUSSELL.. ..	Exchange Buildings, Bradford.
*SMITH, WHEATER	15, Cheapside, Bradford.
SUTCLIFFE, JAMES HENRY	Sandy Gate, Hebden Bridge.
SUTHERS, JAMES	Union Offices, Hull Street, Todmorden.
THORP, ROBERT HAYTON	Land of Green Ginger, Hull.
TODD, WILLIAM HENRY, M.I.C.E. ..	County Buildings, Hull.
WALSH, JOSEPH FREDERICK	Museum Chambers, Halifax.
WATSON, HERBERT JOHN	6, Lendal, York.
WATSON, JOHN.. ..	Cogan Chambers, Bowlalley Lane, Hull.
WATSON, JOHN.. ..	Valuer's Office, Bank Chambers, High Street, Doncaster.
WEATHERHEAD, DAVID WILKINSON	50, Low Street, Keighley.
WEATHERILL, GEORGE FORD	Valuer's Office, Raglan Chambers, Harrogate.
*WELLSTED, WILLIAM HENRY, M.I.C.E.	Prince's Dock Chambers, Hull.
WHELDON, MARTIN LOWISH	5, Coney Street, York.
WHIPP, THOMAS WILLIAM	15, Valley Bridge Parade, Scarborough.
WHITE, ALFRED EDWARD, M.I.C.E.	Town Hall, Hull.

PROFESSIONAL ASSOCIATES :

ARCHER, HAROLD DE BYRLAY	Ridgeway, near Sheffield.
ARMSTRONG, ALBERT LESLIE	12, Dragon Avenue, Harrogate.
ATKINSON, CHARLES CHRISTOPHER	Cumberland Villa, Headingley, Leeds.
BALDEN, JOHN WHITELEY	Bywell, Dewsbury.
BELLAMY, HARRY	30, Scarcroft Road, York.
BEEVER, ROWLAND.. ..	Woodland Mount, Bradford Road North, Huddersfield.
BEVERLEY, ROBERT BERTHOLD	Heath House, near Wakefield.
BINDLOSS, CHARLES HILTON	Skelton Hall.
BLACKMORE, ALFRED CHARLES	Belmont, Cottingham.
BOORD, WALTER BERTRAM	Bewerley, Pateley Bridge.
BOOTH, HERBERT	District Valuer's Office, Commercial Street, Halifax.
BOWES, CHARLES	16, Valley Bridge Parade, Scarborough.
BRADLEY, CECIL GUSTAV	Engineer and Surveyor's Office, Goole.
BRAY, EDWIN	Town Street, Stanningley, Leeds.
BUCKLEY, ALFRED EUSTACE	George Street Chambers, Halifax.
BUTTERFIELD, HENRY AMBLER	Thornleigh, Wath-on-Dearne.
BURMAN, WILLIAM.. ..	Estate Office, Kiveton Park, near Sheffield.
COOKE-YARBOROUGH, ORFEUR FREDERIC	Frickley, Doncaster.
CHAMPION, WILLIAM HALL	Woodville, Pitsmoor, Sheffield.
DAVIS, JOHN	Westfield, Gargrave, via Leeds.
DOUGLAS, NORMAN	Claremont, Grove Hill, Middlesbrough.
DYER, FREDERICK	70, Lindley Street, Holgate, York.
FRANK, THOMAS PEIRSON, A.M.I.C.E.	Town Hall, Ripon.

GOODALL, ERIC WILLIAM ALDRICH	Hardy Grange, Eldwick, Bingley.
GOTT, RALPH EDGAR	Brookfield, Park Grove, Frizinghall, Bradford.
GREENOUGH, HARRY	2, Northfield Terrace, Wibsey, Bradford
GREENWOOD, JOSEPH	4, Drill Street, Keighley.
HAMMOND, JOHN BERNARD	9, Norville Terrace, Headingley, Leeds.
HAWES, FREDERICK KIRK	The Elms, Lowthorpe, Driffield.
HAYWOOD, SAMUEL SPENCER ..	Borough Engineer's Office, Brighouse.
HEBBLETHWAITE, CHARLES HENRY	10, Waterhouse Street, Halifax.
HEPWORTH, HERBERT RAIKES ..	County Surveyor's Office, Wakefield.
HEWITT, FRANK	Town Hall, Hoyland, Barnsley.
HIRST, WILLIAM FREDERICK ..	Chatham House, Rothwell, near Leeds.
HOLLIS, RALPH	Springfield, Skirlaugh, Hull.
HOPKINSON, RICHARD BROWN ..	Broadwood, Storthes Road, Birkby, Hud- dersfield.
HOULDSWORTH, AUSTIN FRANK ..	100, Alliance Avenue, Hull.
HUNT, ORLANDO WILLIAM	Winterfield, Bedale.
INGLEBY, ERNEST JAMES, N.D.A. .	Woodville, Roundhay, Leeds.
JOHNSON, ARTHUR WILLIAM ..	18, Queen's Road, Harrogate.
KAYE, HERBERT	8, St. John's North, Wakefield.
KELLY, GEORGE WILLIAM CALVER	St. James' Street, Wetherby.
KENNEDY, PERCY EDWARD	Valuer's Department, Inland Revenue South Parade, Northallerton.
KERR, ARTHUR HERBERT	Blake Street, York.
KING, PERCY JAMES CHURCH ..	Wynyard, West Park, Far Headingley Leeds.
LEE, GEORGE CANSFIELD	144, The Mount, York.
LONGBOTTOM, JOHN LEONARD ..	Dingleside, Gledholt, Huddersfield.
LORD, FREDERICK WILLIAM	Valuer's Department, Inland Revenue Bank Chambers, Doncaster.
LUNN, ALGERNON PERCY	Wentbridge, Pontefract.
MADDOCK, GEORGE	Messrs. Walsh and Nicholas, Museum Chambers, Halifax.
MALLINSON, CHARLES HERBERT ..	Market Place, Huddersfield.
MARSHALL, GEORGE ERNEST ..	The Hollies, Handsworth, Sheffield.
MAUGHAN, JOHN	Estate Office, Jervaulx Abbey, Middle- ham, S.O.
MELLOR, JOHN FRANCIS SHAW ..	The Cottage, Brodsworth, Doncaster.
METCALFE, WILLIAM	Kellingley, Knottingley.
MOISER, CYRIL	Heworth Grange, York.
ODDY, JOSEPH RONALD RIDLEY ..	45, Horton Grange Road, Bradford.
OSBORN, GEORGE	Ashleigh, Totley Brook Road, near Sheffield.
PAGE, JOSEPH	Grove House, Upper Wortley Road, Leeds
PASCOE, HERBERT	County Hall, Wakefield.
PETTINGALE, CHARLES EDWARD ..	63, Fanfield Road, Birkby, Huddersfield.
RENTON, THEODORE ROLANDE	
VICTOR	2, Queen Parade, Harrogate.

RICHARDSON, GEORGE	29, Athol Street, Middlesbrough.
RICHARDSON, JOHN STOCKS	East Parade Chambers, Leeds.
RICKARDS, CLEMENT ARCHBOLD	
ROSS	Restalrig, Woodlesford, near Leeds.
RIVERS, CHARLES EDWIN	Municipal Offices, Harrogate.
ROBERTS, EDWARD LAMPLOUGH..	Brantwood, Kenwood Bank, Sheffield.
RYLATT, WALTER PUCKERING ..	249, Beverley Road, Hull.
SHARP, HERBERT FIRTH.. .. .	1, Briggs Villas, Queensbury, Bradford.
SHAW, ARTHUR	Ramsden Estate Offices, Railway Street, Huddersfield.
SHAW, CHARLES WILLIAM	Church Street Chambers, Dewsbury.
SISSONS, WILLIAM WYRILL	Waterloo Manor, Garforth, near Leeds.
SLADDIN, ARNOLD GLADSTONE ..	36, Lightcliffe Road, Brighouse.
SLATER, ARTHUR JAMES.. .. .	1, Barden Place, Armley, Leeds.
SMITH, JOHN EDWARD	Shipley Fields, Frizinghall, Bradford.
STONE, FREDERIC	Estate Office, Newmillerdam, Wakefield.
STOTT, HERBERT WHARTON.. ..	Bay Hall, Huddersfield.
SUGDEN, ALBERT JOWETT	Architects' Department, County Hall, Wakefield.
TATE, HENRY TINDALL	6, Arlington Avenue, Cottingham.
TERRY, FRANCIS WILLIAM	40, Grosvenor Terrace, Bootham, York.
THOMPSON, CLAUDE WILLIAM	
GEORGE HUGH	Estate Office, Escrick, York.
THOMPSON, THOMAS ERRINGTON ..	Estate Office, Jervaulx Abbey, Middle- ham, S.O.
WADE, HENRY.. .. .	10, Pitt Street, Barnsley.
WADSLEY, MICHAEL JAMES	88, Prospect Street, Hull.
WALL, IRVING	Thornroyd, Wakefield Road, Dalton, Huddersfield.
WALLER, HORACE	Valuation Offices, Inland Revenue, Mid- land Bank Buildings, Middlesbrough.
WEETMAN, WILLIAM CHARLES	
CUMMING	548, Ecclesall Road, Sheffield.
WEST, ARTHUR SMITH	7, Haywra Crescent, Harrogate.
WINDER, FRANCIS ARNOLD	Corn Exchange Chambers, Sheffield.
WOODHEAD, HAROLD HAYDN	16, Peterson Road, Wakefield.
WORMLEIGHTON, BERNARD JOSEPH	Council Offices, Goole.

WALES (NORTH).

Containing the Counties of Anglesey, Carnarvon, Denbigh, Flintshire,
and Merionethshire.

(Wales (North) Committee.)

FELLOWS :

BIRCH, RICHARD ELWYN, B.A. (<i>Cantab.</i>)	Bryncelyn, St. Asaph, Flintshire.
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Cragg, George Edwin.. ..	Cayley Estate Office, Colwyn Bay, Denbighshire.
Evans, Samuel	County Offices, Mold, Flintshire.
Gardiner, Robert Strachan ..	Hawarden Estate Office, Hawarden, Flintshire.
Jones, William Edward	Anglesey Estate Office, Graig, Llanfairpwll, Anglesey.
Lynes, Humphrey Dod.. ..	The Halkyn Estate Office, Holywell, Flintshire.
MacNicol, Douglas Henry ..	Derwas, Abergelle, Denbighshire.
*Pickering, William Cloves ..	Rhewl House, Mostyn, Flintshire.
*Porter, John Merry	Estate Office, Colwyn Bay.
Roberts, John, N.D.A.	Perfeddnant, Towyn, Merionethshire.

PROFESSIONAL ASSOCIATES :

Bateman, Frank Graham	Graig, Llanfair, P.G., Anglesey.
Dykens, Philip Llewelyn	Pendre, Holywell, Flintshire.
Evans, Edward Arthur	Frondeg, Carnarvon.
More, John Novis.. ..	Crown Lodge, Harlech.

WALES (Mid).

Containing the Counties of Montgomery and Radnor.

(Salop, Hereford, and Mid-Wales Committee.)

FELLOWS :

Addie, John Heathcote	Powis Castle Estate Office, Welshpool, Montgomeryshire.
*Addie, William Forrester ..	Powis Castle Estate Office, Welshpool, Montgomeryshire.
Gillart, David	Penralt, Machynlleth, Montgomery.
Grant, James.. ..	Glandwr, Llanidloes, Montgomeryshire.
Gunter, James	Estate Office, Glasbury, Radnorshire.
Owen, William Scott	Cefngwifed, near Newtown, Montgomeryshire.
*Poundley, John Edward	Kerry, Newtown.

PROFESSIONAL ASSOCIATES :

Mackintosh, William Smith ..	Baileymawr, Penybont, Radnorshire.
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WALES (SOUTH).

Containing the Counties of Brecknock, Cardigan, Carmarthen,
Glamorgan, and Pembroke.

(Wales (South) and Monmouthshire Committee.)

FELLOWS :

BLOSSE, EDWARD F. LYNCH	Charles Street Chambers, Cardiff, and Coytrehen Estate Office, Aberkenfig S.O.
*COLES, SAMUEL HOOD COWPER ..	Penmyarth, Crickhowell, Brecknockshire.
*CORBETT, EDWIN WORTLEY MONTAGU	Bute Estate Office, Castle Street, Cardiff. 4, Park Place, Cardiff.
DAVID, EDMUND USSHER	Hafdre, Llanwrtyd Wells.
DAVIES, CYRIL FROODVALE	Valuer's Department, 13, St. Andrew's Crescent, Cardiff.
DAVIES, DAVID THOMAS	Froodvale, Llanwrda, Carmarthenshire.
*DAVIES, JOHN MORGAN	Glasfryn, Pontypridd.
EVANS, ARTHUR OWEN	The Mount, Carmarthen.
FRANCIS, JOHN	Gelley-Wernen Estate, Llanelly, Carmar- thenshire
GRIFFITHS, WILLIAM	Town Hall, Cardiff.
HARPUR, WILLIAM, M.I.C.E.	93, St. Mary Street, Cardiff.
HERN, SAMUEL	8, Clarendon Road, Sketty, Glam.
HEWS, THOMAS GREENSLADE	Urban District Council Office, Barry.
HINCHSLIFF, EDWARD ROBERT ..	4, Gore Terrace, Swansea.
HOSKINS, MARCUS	George Street, Llandilo.
JENKINS, WILLIAM DAVID	Valuer's Office, Victoria Chambers, The Parade, Neath.
JONES, JOHN RICE	46, Waterloo Street, Swansea.
LEEDER, ERNEST HOLTHAM	Hafod Estate Office, Devil's Bridge S.O., Cardiganshire.
MORRIS-DAVIES, JAMES GEORGE ..	
OSMOND-SMITH, FRANCIS HENRY GEORGE, M.R.A.C.	County Council Offices, Cardiff.
OWEN, THOMAS HENRY RULE	High Street, Haverfordwest, Pembroke- shire.
OWEN, THOMAS RULE	High Street, Haverfordwest, Pembroke- shire.
PRICE, FRANCIS HOLBORROW GLYNN	7, Picton Place, Swansea.
PRITCHARD, HENRY A.	Royal Agricultural College, Cirencester, and St. Fagan's, Cardiff.
PUDDICOMBE, WILLIAM PHIPPEN ..	Council Offices, Mumbles, near Swansea.
PUGH-JONES, DAVID	6, Kimberley Road, Roath Park, Cardiff.
RANDELL, FRANCIS WILLIAM	15, Brooklands Terrace, Swansea.

REES, ITHEL TREHARNE, M.I.C.E. . .	Guildhall Chambers, Cardiff.
REES, WILLIAM JOHN	The Laurels, Swansea.
ROONEY, SAMUEL	Cefn Mably Chambers, 9, Quay Street, Cardiff.
SAYER, GEORGE WILLIAM, CAPTAIN	Royal Engineer Office, Pembroke Dock.
SEEL, ROBERT HAROLD	Theatre Royal Chambers, Cardiff.
THOMAS, GEORGE WILLIAM . . .	13, St. Andrew's Crescent, Cardiff.
THOMAS, ILLTYD	17, Quay Street, Cardiff.
WEBB, CLARENCE ALBERT . . .	7, Church Road, Penarth, Cardiff.
WILKINS, WILLIAM	Llanelly, Carmarthenshire.
WILLIAMS, GERALD GARNONS . .	Ashburnham Estate Office, Burry Port.
WILLIAMS, RICHARD ERNEST HAVARD	Valuer's Office, 13, St. Andrew's Crescent, Cardiff.

PROFESSIONAL ASSOCIATES :

ARNOLD, WILLIAM RICHARD . . .	Llwyn-coed, Morriston, S.O., Glamorgan-shire.
BENNETT, ARTHUR JOHN	1, Montpelier Terrace, Swansea.
BENNETT, FRANK WILLIAM . . .	St. Julien's, Westcross, near Swansea.
BRYANS, MAURICE EDWARD . . .	27, High Street, Cardiff.
CLARK, PHILIP LOCKHART . . .	13, St. Andrew's Crescent, Cardiff.
CLARKE, THOMAS GUY	48, Cardiff Road, Llandaff.
DAVID, GEORGE WILLOUGHBY, B.A. (<i>Cantab.</i>)	Old Bank Chambers, 27, High Street, Cardiff.
DAVID, LEWIS WOOLLEY, B.A. (<i>Cantab.</i>)	Old Bank Chambers, 27, High Street, Cardiff.
DAVIES, JOHN WILLIAM SATTERLEY HUMPHREYS	19, Northampton Place, Swansea.
EVANS, HENRY MONTAGUE . . .	City Engineer's Department, City Hall, Cardiff.
FORREST, WILLIAM	Windsor Estate Office, St. Fagan's, Cardiff.
GOFF, WILLIAM SETTEN	234, High Street, Swansea.
HARPUR, FRED	6 and 7, St. John's Square, Cardiff.
HOMFRAY, HERBERT RICHARDS .	32, Charles Street, Cardiff.
HOOPER, STANLEY	Bryngwili, Knoll Avenue, Swansea.
HOPLEY, SYDNEY FRANK	Council Offices, Pontyclun, Glam.
HUGHES, WILLIAM PARRY . . .	6, Nott Square, Carmarthen.
JENKINS, CHARLES HERBERT . .	District Valuer, Kensington House, Haverfordwest.
JENKINS, HAROLD JOHN	4, College Street, Swansea.
JENKINS, WILLIAM LIONEL . . .	County Surveyor's Office, Llandilo.
JOHN, DAVID HOPKIN	Plough Inn, Cefn Cribbwr, near Bridgend, Glam.
JONES, PHILIP VIVIAN	Hazeldene, Hengoed, via Cardiff.
KILFORD, WILLIAM GEORGE . .	Messrs. David and David, 27, High Street, Cardiff.
LEE, JOHN PINCKE	Plas Tirion, Cowbridge Road, Bridgend, Glamorganshire.

LOVELUCK, EDWARD	23, Park Street, Bridgend, Glamorgan-shire.
NICHOLLS, CHARLES WILLIAM ..	97, Brynmor Road, Swansea.
PASCOE, JOHN BARRON	Tregothnan, Eaton Grove, Swansea.
PHILLIPS, WILLIAM NEWTON ..	Cawdor Estate Office, Carmarthen.
PRICE, DANIEL HENRY	Frisco Villa, Mountain Ash.
RICHARDS, JOHN SYDENHAM ..	9; Gore Terrace, Swansea.
ROGERS, JOHN	1, Talbot Street, Llanelly.
TAYLOR, HAROLD TOM	3, Sheffield Place, Mumbles, Swansea.
THOMAS, ARTHUR JOHN	Eastfield, St. Thomas, Swansea.
THOMAS, JOHN HUMPHREY	
ENGLAND	6 and 7, St. John's Square, Cardiff.
THOMAS, ROBERT ROGERS	36, Bryn Road, Swansea.
WALKER, JOHN WILLIS	Gwynfa, Creigiau, near Cardiff.
WALTERS, WILLIAM DAVID	22, Berw Road, Llwynypia.
WILLIAMS, DANIEL SMITH	47, Queen Street, Cardiff.

SCOTTISH COMMITTEE.

FELLOWS :

ADAM, THOMAS	27, Union Street, Glasgow.
AITKEN, JOHN MALCOLM	Castlemilk Estates Office, Norwood, Lock- erbie, Dumfriesshire.
AITKENHEAD, WILLIAM	Roughlands, Carron, Stirlingshire.
ALLAN, ROBERT	Halfway House, Whitburn.
AMON, HERBERT	H.M. Naval Establishment, Rosyth, near Inverkeithing.
ANDERSON, ROBERT	Property Agent, 95, Bath Street, Glasgow.
BARR, JAMES	21, West George Street, Glasgow.
BATHGATE, CHARLES S.	26, Bellgrove Street, Glasgow.
BAXTER, JOHN	243, St. Vincent Street, Glasgow.
BEATTIE, GEORGE LENNOX	136, George Street, Edinburgh.
BEATTIE, WILLIAM HALDEN	40, Murrayfield Avenue, Edinburgh.
BELL, ANDREW WALKER	St. Margaret's Hall, Dunfermline.
BELL, GEORGE	212, St. Vincent Street, Glasgow.
*BINNIE, THOMAS	207, Hope Street, Glasgow.
BINNIE, THOMAS, JUN.	207, Hope Street, Glasgow.
BLAIR, ALEXANDER	30, George Square, Glasgow.
BROWN, CHARLES	Kerse Estate Office, Falkirk, Stirlingshire.
BROWN, WILLIAM	63, John Street, Glasgow.
BURNET, FRANK	180, Hope Street, Glasgow.
CAMERON, ANGUS	Benmore, Kilmun, Argyllshire.
CANCH, THOMAS RICHARD	3, Greenbank Crescent, Morningside, Edinburgh.
COLES, WALTER GEORGE	Scottish Office Engineering Department, 122, George Street, Edinburgh.

CONNOR, GEORGE HARRY ADAMS	Estates Office, Longniddry, Haddingtonshire.
CONSTABLE, GEORGE WILLIAM ..	Traquair Estate Office, Innerleithen.
CUNNINGHAM, ROBERT	Branxholme, Hawick, Roxburghshire.
DAVIDSON, CHARLES	Terrace Buildings, Paisley, Renfrewshire.
*DAVIDSON, JAMES INGLIS	Saughton Mains, Corstorphine, Midlothian.
EDGAR, JAMES.. .. .	Poltalloch Estate Office, Lochgilphead.
FAIRBAIRN, THOMAS	The Red House, Cluny Gardens, Edinburgh.
FERGUSON, JOHN	30, George Square, Glasgow.
FRASER, GEORGE JOHN JAMES	
HAMILTON GORDON	Dalzell Estate Office, Motherwell.
FRASER, THOMAS SMELLIE	209, St. Vincent Street, Glasgow.
FRASER, WILLIAM	209, St. Vincent Street, Glasgow.
FREW, GORDON THOMSON	216, West George Street, Glasgow.
FYFE, JOHN WILLIAM	Inland Revenue, 53, Hanover Street, Edinburgh.
GILCHRIST, JOHN	81, Hope Street, Glasgow.
GILLESPIE, JOHN	Blackhall, Paisley, Renfrewshire.
GLEN, JAMES	Ashfield, Park Place, Stirling.
GORDON, ALEXANDER WILLIAM	
ROBERT	Queensgate, Inverness.
GRAY, JOHN	27, Hill Street, Alloa.
HAMILTON, JOHN COCHRANE ..	53, Hanover Street, Edinburgh.
HAMILTON, ROBERT.. .. .	Lands Valuation Office, Greenock.
HARKNESS, JOHN	54, St. Leonard's Road, Ayr.
HART, JOHN	Cowie Mains, Stonehaven, Kincardineshire.
HARVIE, ROBERT	8, Clyde Street, Motherwell.
HENDRY, ROBERT	25, Herries Road, Maxwellpark, Glasgow.
HORSBRUGH, CHARLES EDWARD ..	Blairquhosh, Blanefield, Glasgow.
HOWATT, WILLIAM.. .. .	146, Buchanan Street, Glasgow.
JOHNSTONE, JAMES.. .. .	Alloway Cottage, Ayr.
KIRKWOOD, CHARLES	61, West Regent Street, Glasgow.
KNOX, ALEXANDER.. .. .	53, Bothwell Street, Glasgow.
LAING, DAVID TAYLOR	20, Bridge Street, Glasgow.
LAMMIE, GEORGE	138, Hope Street, Glasgow.
LIGHTBODY, FORREST HAY	56, Queen Street, Edinburgh.
LOGAN, JAMES.. .. .	Coltness, Wishaw, Lanarkshire.
MACCALLUM, ALEXANDER DUNCAN	132, West Nile Street, Glasgow.
MACCALLUM, JAMES	Town Hall, Motherwell, Lanarkshire.
MACDONALD, RANALD RODERICK ..	16, Union Terrace, Aberdeen.
MACDOUGALL, ROBERT	63, John Street, Glasgow.
McHARRIE, STAIR	Rephad, Stranraer, Wigtownshire.
McLAREN, JOHN THOMAS	The Leuchold, Dalmeny Park, Edinburgh.
McMICHAEL, JAMES, JUN.	1, Argyll Arcade, Glasgow.
MACPHERSON, WILLIAM	Montrose Estate Office, Catter House, Drymen, Stirlingshire.
MAKINS, JAMES VINCENT	30, George Square, Glasgow.

MALCOLM, GEORGE.. .. .	Invergarry, Inverness-shire.
MARWICK, THOMAS PURVES	43, York Place, Edinburgh.
MATHER, JAMES	10, Barnton Gardens, Davidson's Mains, near Edinburgh.
MIDDLETON, JAMES.. .. .	Estate Office, Braehead, Kilmarnock.
MURDOCK, ROBERT.. .. .	91, Maxwell Road, Glasgow.
MURRAY, JOHN CAMPBELL	Pollok Estates Office, 216, West George Street, Glasgow.
MURRAY, JOSEPH	Camperdown Estates Office, Dryburgh, Lochee, Forfarshire.
MURRAY, WILLIAM WATSON	Catter House, Drymen, Stirlingshire.
MYERS, ALBERT ROBERT.. .. .	H.M. Office of Works, Edinburgh.
OLDRIEVE, WILLIAM THOMAS, F.R.I.B.A.	H.M. Office of Works, Edinburgh.
PARK, ALEXANDER.. .. .	175, Hope Street, Glasgow.
PATERSON, JOHN SALMON	70, Wellington Chambers, Ayr.
PURDIE, ANTHONY	241, West George Street, Glasgow.
PURVES, JAMES	Dunskey Estate Office, Portpatrick.
RALSTON, ANDREW AGNEW	Philpstoun House, West Lothian.
RALSTON, CHARLES WALLACE	Dabton, Thornhill, Dumfriesshire.
RENTON, JAMES	Sunbank, Perth.
ROBB, WILLIAM JOHNSTON	53, Bothwell Street, Glasgow.
ROBERTSON, JOHN	Panmure Estate Office, Carnoustie, For- farshire.
SHARP, JOHN GRANT	172, Buchanan Street, Glasgow.
SMITH, JONAH WALKER	Local Government Board, George Street, Edinburgh.
SMITH, ROBERT	Cranstoun, Riddell, Dalkeith.
SMITH, THOMAS	The Castle, Maybole.
STEVENSON, ALLAN.. .. .	14, Cathcart Street, Ayr.
TANNAHILL, ROBERT DUNLOP	Lands Valuation Office, Kilmarnock.
THOMSON, JOHN LORIMER	Valuer's Department, 31, Albert Square, Dundee.
TURNER, JOSEPH HARLING	Portland Estate Offices, Kilmarnock.
WALKER, GEORGE JAMES	3, Golden Square, Aberdeen.
WALKER, JOHN.. .. .	74, Bath Street, Glasgow.
WALLACE, THOMAS DOUGLAS.. .. .	Callendar Park, Falkirk, Stirlingshire.
WALLACE, WILLIAM SYDNEY SMITH	"Annfield," Woodside, Coupar Angus Perthshire.
WILLS, JOHN BROOM	15, Bellgrove Street, Glasgow.
WILSON, JAMES, C.A.	135, Wellington Street, Glasgow.
YOUNG, HENRY STEPHEN MATTHEWS	Heathfield, Irvine, Ayrshire.
YUILLE, ROBERT	70, South Portland Street, Glasgow.

PROFESSIONAL ASSOCIATE :

AMENT, ROBERT	The Home Farm, Rosneath Castle Dumbartonshire.
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BLAIR-IMRIE, HEW	Lunan House, Montrose.
BREBNER, ROBERT FREDERICK ..	Estate Office, Strathallan Castle, Machany, Perthshire.
COKER, RALPH HECTOR	52, Tassie Street, Shawlands, Glasgow.
DARLING, JOHN	The Lodge, The Royal Infirmary, Perth.
FOULIS, ARCHIBALD KEITH	Roselea, Motherwell.
HENDERSON, RICHARD	Portland Estate Office, Kilmarnock.
JACKSON, LAMBERT.. .. .	35, Woodside Quadrant, Glasgow.
MCCALLUM, DANIEL.. .. .	325, Byres Road, Glasgow.
MCTAGGART, HUGH HARVEY.. ..	2, Norham Street, Crossmyloof, Glasgow.
MCWILLIAM, JOHN ALEXANDER ..	29, Eyre Crescent, Edinburgh.
MALCOM, JAMES ARCHIE.. .. .	Old Bank House, Largs, Ayrshire.
MEACHER, SYDNEY GEORGE	Marlee, near Blairgowrie, Perthshire.
MILLAR, ALEXANDER WALKER ..	200, High Street, Kirkcaldy, Fifeshire.
MORRISON, JOHN BAXTER	Elderslie Estates Office, Deanside, Renfrew.
MUIRHEAD, THOMAS	220, St. Vincent Street, Glasgow.
PATON, JOSEPH TRAIN	Callendar Estate Office, Callendar Park, Falkirk.
REID, ROBERT DONALD	4, Barfillan Terrace, Paisley Road West, Glasgow.
ROBERTSON, CHARLES BOYD	Faskally Estate Office, Pitlochry.
SCOTT, JAMES COSPATRICK	4, The Square, Kelso.
SHIRLEY, HENRY TOWNSEND.. ..	Dalraddie, Calder Road, Mossend.
STEVENSON, ALEXANDER EWING..	Blawarthill, Yoker, by Glasgow.
SYMS, REGINALD HARDY	Dalry, Kirkcudbright.
TAIT, JOHN WILSON.. .. .	Gresham Buildings, 71, George Street, Edinburgh.
WEDDELL, ROBERT HOUSTON	Park Villa, Uddingston, Lanarkshire.
WHYTE, THOMAS	118, Main Street, Glasgow.
YOUNG, JAMES WEIR	198, West George Street, Glasgow.
YOUNG, THOMAS, N.D.A... .. .	Woodbine Villa, Cupar, Fife.
YOUNG, WILLIAM ROSS	Borough Surveyor, North Berwick.

IRELAND.

(Irish Members forming the Irish Branch Committee.)

FELLOWS :

ADAIR, JOHN OLPHERT	Ballynoe, Tullow, Co. Carlow.
*ALEXANDER, HENRY G. S., COLONEL	Derrygally, Moy, Co. Tyrone.
ANDERSON, ALEX. CAREW	Ballymountain, Waterford.
ANTHONY, ERNEST JOHN	95, Lower Leeson Street, Dublin.

ARMSTRONG, ALEXANDER MOORE, CAPT.	Culmore House, Kilrea, Co. Londonderry.
ARMSTRONG, ELLIOTT GRAHAM, B.A. (Dublin)	Rent Office, Ahascragh, Ballinasloe, Co. Galway.
ARMSTRONG, REGINALD GRAVES . .	Estate Office, Shelton Abbey, Arklow, Co. Wicklow.
BAILLIE, JOHN ROBERT, LIEUT.- COLONEL	Abercorn Estate Office, Strabane, Co. Tyrone.
BALDWIN, CHAMBRE CORCOR THOMAS	
BARNES, WILLIAM ARTHUR, B.A. (Dublin)	Westland, Kells, Co. Meath.
BARRINGTON, JOHN BEATTY . .	Barrington Street, Limerick.
*BARTON, HENRY DUPRE MALKIN	The Bush, Antrim.
BEAMISH, WILLIAM HENRY	2, South Mall, Cork.
BECKETT, W. FRANK	10, Leinster Street, Dublin.
BLACKLEY, TRAVERS ROBERT . .	Drumbar, Cavan.
BOLTON, SAMUEL H.	34, Westland Row, Dublin.
BOURCHIER, CLAUD J.	Charleville Estate Office, Tullamore, King's Co.
BRIDGE, HENRY POWELL	Racket Hall, Roscrea, Tipperary.
BROADLEY, EDWARD BARRY, MAJOR	73, South Mall, Cork.
BROWNE, ERNEST H.	Brookfield, Tullamore.
BROWNLOW, CLAUDE	Estate Office, Coolderry, Carrickmacross, Co. Monaghan.
BURKE, HENRY ANTHONY	Drumkeen, Ballinamallard, Co. Fermanagh.
BURKE, WILLIAM CREAGHE	Clonne, Ballinrobe, Co. Mayo.
BUTLER, WALTER SELBY	Green Mount, Castle Bellingham, Co. Louth.
CARROLL, THEODORE FREDERICK . .	80, South Mall, Cork.
CARSON, WILLIAM B.	Brookfield, Malahide, Co. Dublin.
CHAMBRE, C. B. M.	Northland Row, Dungannon, Co. Tyrone.
CHATTERTON, ROBT. SMITH	Belmount, Raheny, Co. Dublin.
CHEEKE, WILLIAM ALEXANDER . .	Lincoln Chambers, Lincoln Place, Dublin.
CLAYTON, JOHN GRAVES	18, Nassau Street, Dublin.
COOPER, JAMES ALEXANDER	Lissadell Estate Office, Co. Sligo.
COOTE, STANLEY VICTOR, M.A. (Oxon.)	Burley Manor, Ringwood, Hampshire.
CROSBIE, JAMES DAYROLLES	Gurtenard, Listowel, Co. Kerry.
*DARLEY, EDMUND SANDERS	5, College Green, Dublin.
DEANE, GEORGE B.	6, Lansdown Road, Dublin.
DENNY, FRANCIS MCGILLYCUDDY . .	17, Denny Street, Tralee.
*DICKINSON, CHARLES, B.A. (Dublin)	23, South Frederick Street, Dublin.

DOHERTY, RICHARD WHEELER ..	Oaklands, Bandon, Co. Cork.
EDGEWORTH, THOMAS NEWCOMEN	Kilshrewly, Edgeworthstown.
ELLIS, ERNEST FRANCIS LESLIE ..	St. Austin's, Inch, Co. Wexford.
FARRELL, EDWARD FRANCIS, LIEUT.-COLONEL	Walterstown, Moynalty, Kells, Co. Meath.
FITZGERALD, JAMES H. B. PENROSE	The Estate Office, Middleton, Co. Cork.
*FITZGERALD, PETER DAVID .. .	Estate Office, Adare, Co. Limerick.
FITZGERALD, ROBERT JOHN .. .	Ballyard House, Tralee.
FORBES, ARTHUR	Earls Vale, Cavan.
FRANKS, MATTHEW HENRY ...	Woodbrook, Mountrath, Queen's County.
FRANKS, MATTHEW HENRY, JUN.	Westfield, Mountrath, Queen's County.
FREND, HENRY... .. .	Derry House, Brosna, S.O., King's County.
GARVEY, GEORGE BLOOMFIELD ..	Carrigduve, Greystones, Co. Wicklow.
GARVEY, TOLER ROBERT, JUN. ..	Estate Office, Parsonstown.
GIBBON, EDWARD ACTON .. .	Elmhurst, Waterford.
GLOSTER, THOMAS EDWARD .. .	Collon, Co. Louth.
GUINNESS, GERALD SEYMOUR ..	16, College Green, Dublin.
GUINNESS, HOWARD RUNDELL ..	16, College Green, Dublin.
HALL, DAVID	18, South Mall, Cork.
HALL, FRANCIS SAMUEL.. . . .	8, Westmoreland Street, Dublin.
HAMILTON, ARTHUR	40, Lower Dominick Street, Dublin.
HAMILTON, EDWARD CHETWOOD, MAJOR	Woodstock Estate Offices, Inistioge.
HARDMAN, EDWARD CHAMBRE ..	14, Molesworth Street, Dublin.
HARGRAVE, WILLIAM HARRISON, A.M.I.C.E. (Ireland)	68, Grosvenor Square, Rathmines, Co. Dublin.
HARVEY, JAS. G. MOREWOOD ..	Northern Bank Buildings, Londonderry.
HATTE, WILLIAM MUNDAY .. .	Nassau Street, Dublin, and Charleville, Co. Cork.
HEARD, RICHARD	15, South Mall, Cork.
HEMPHILL, CHARLES GEORGE CATHCART	11, Ely Place, Dublin.
*HEWSON, GEORGE RAWDON MAURICE	Dromahair, Co. Leitrim.
HODSON, GILBERT NEVILLE .. .	Ardbrae, Bray, Co. Wicklow.
HODSON, RICHARD EDMOND, M.A. (Dublin)	Coolfadda House, Bandon, Co. Cork.
HOLMES, WILLIAM EDEN .. .	76, George Street, Limerick.
HOSFORD, EDWARD HENRY POE..	Clounalour, Tralee, Co. Kerry.
HUGGARD, WILLIAM	Strathlomond, Omagh, Co. Tyrone.
IRVINE, HENRY, LIEUT.-COL. ..	Eltham Lodge, Cheltenham, Gloucester- shire.
JAMESON, ROBT. WILLIAM .. .	39, Merville Place, Kingstown, Co. Dub- lin.
JOHNSON, JOCELYN OTWAY .. .	
JOHNSTONE, AUGUSTUS FREDERIC	

KELLY, RICHARD HENRY	21, The Mall, Waterford.
KEMPSTER, JOHN, B.A.	95, Lower Leeson Street, Dublin.
KENNEDY, MICHAEL A.	Kinkella, Loughrea, Co. Galway.
KINCAID, JOSEPH WESTBY	7, Leinster Street, Dublin.
KIRWAN, DENIS BIRMINGHAM ..	Dalgin, Tuam, Co. Galway.
KNOX, ALBERT FREDERIC	Estate Office, Ballina, Co. Mayo.
KNOX, ALBERT HENRY	Ballina, Co. Mayo.
KNOX, EDWARD ERNEST	8, Milward Terrace, Bray.
KNOX, ERNEST HENRY	Greenwood Park, Crossmolina, R.S.O., Co. Mayo.
LEE-NORMAN, ALEXANDER HENRY	Estate Office, Rush, Co. Dublin.
LE FANU, VICTOR CHARLES	Estate Office, Bray, Co. Wicklow.
L'ESTRANGE, HENRY G... ..	The Estates Office, Sligo.
LLOYD, AVERELL	Benburb, Moy, Co. Tyrone.
LONGFIELD, HENRY FOSTER ..	Grange Erin, Douglas, Cork.
LYLE, SYDNEY J.	Ballycastle, Co. Antrim.
M'CLINTOCK, ARTHUR	18, Nassau Street, Dublin.
MCCLURE, ROBERT	Estates Office, Glenhazel, Kenmare, Co. Kerry.
MCDONALD, ALLAN, M.A. (<i>Dublin</i>)	Glenarm, Co. Antrim.
MAHON, GEORGE GILBERT	The Rent Office, Ahascragh, Co. Galway.
MARMION, THOMAS HENRY	Estates Office, Cappoquin.
MAUDE, ANTHONY FRITZ	Hillsborough, Co. Down.
MAUDE, CHRISTOPHER HUGH ..	Lenaghan, Enniskillen, Co. Fermanagh.
MAUNSELL, GEORGE EDWARD SCARLETT	Donadea Castle, Donadea, Co. Kildare.
MAUNSELL, RICHARD EDWARD ..	9, Ely Place, Dublin.
MAXWELL, HENRY PERCEVAL ..	Lansdowne Lodge, Kenmare, Co. Kerry.
MEDCALF, WILLIAM	10, Leinster Street, Dublin.
MEREDITH, LEWIS BOYLE	Graiginconn, Bray, Co. Wicklow.
MONTGOMERY, WILLIAM ALEXANDER	2, Wellington Place, Belfast.
MURPHY, JAMES FRASER, MAJOR..	Estate Office, Boyle, Co. Roscommon.
NASH, SIR VINCENT, D.L.	85, George Street, Limerick.
NEWPORT, GEORGE BELLINGHAM..	Rockview, Inistioge, Co. Kilkenny.
O'BRIEN, DONOUGH RICHARD ..	16, Upper Mallow Street, Limerick.
OWEN, ARTHUR JOHN	Estate Office, Lismore Castle, Lismore.
PENROSE, JAMES EDWARD	Dromore, Mallow.
PURCELL, WILLS W.	Highbury House, Woodlane, Falmouth.
QUIN, RICHARD	Gaultier, Woodstown, Waterford.
ROBERTS, EDWARD USSHER	Roundstone, Galway.
ROBINSON, HENRY ARTHUR	Seamount, Sligo.
ROBINSON, RICHARD St. GEORGE..	Cahir Abbey, Cahir, Co. Tipperary.
*ROCHFORD, WILLIAM	1, Upper Ely Place, Dublin.
ROE, WILLIAM JAMES, B.A. (<i>Dublin</i>)	The Hill, Monaghan.
ROGERS, HARRY	Cliff House, Enniscorthy.
RUTTLEDGE, FRANCIS	Rossmally, Westport, Co. Mayo.
RUTTLEDGE, THOMAS F... ..	

RUTTLEDGE, THOMAS HENRY BRUEN	42, North Great George Street, Dublin.
*SANDERS, ROBERT MASSY DAWSON	Sanders Park, Charleville, Co. Cork.
SCLATIER, EDWARD	Boyne Hill, Hillsborough, Co. Down.
SCOTT, JOHN RUSSELL	5, Haddon Terrace, Clontarf, Dublin.
SMITH, GEORGE YOUNG	Stradowan, Omagh, Co. Tyrone.
STEPHENS, SAMUEL	13, Donegall Square North, Belfast.
STEPHENS, WILLIAM HENRY ..	13, Donegall Square North, Belfast.
STEWART, EDWD. P., CAPT. .. .	4, Kildare Street, Dublin.
STEWART, GEORGE FRANCIS ..	Summerhill, Killiney, Co. Dublin.
STEWART, GEORGE PAKENHAM ..	21, Westland Row, Dublin.
STEWART, HENRY PAKENHAM ..	6, Leinster Street, Dublin.
STEWART, WILLIAM THOMAS ..	6, Leinster Street, Dublin.
STOKES, RICHARD	60, Dawson Street, Dublin.
STOPFORD, THE HON. GEORGE FREDERICK WILLIAM	The Estate Office, Gorey, Co. Wexford.
STUDDERT, R. R.	Hazlewood, Quin, Co. Clare.
SWINEY, WILLIAM D.	Moyagh, Ramelton, Co. Donegal.
SYNGE, EDWARD	Estate Office, 11, Leinster Street, Dublin.
TATLOW, JOHN GARNETT	7, Belgrave Square West, Monkstown, Co. Dublin.
TAYLOR, GEORGE	Estate Office, Westport, Co. Mayo.
TAYLOR, J. GODFREY L.	Grangeville, Fethard, Co. Waterford.
TENER, EDWARD SHAW	The Square, Loughrea, Co. Galway.
TOWNSHEND, CHARLES LOFTUS ..	15, Molesworth Street, Dublin.
TOWNSHEND, JAMES RICHARD CLARKE	23, South Frederick Street, Dublin.
TOWNSHEND, THOMAS COURTNEY ..	23, South Frederick Street, Dublin.
TOWNSHEND, THOMAS LOFTUS ..	15, Molesworth Street, Dublin.
TRENCH, ARTHUR	Burleigh, Burlington Road, Dublin.
TURNER, FREDERICK ADOLPHUS BRABAZON	The Estate Office, Gorey, Co. Wexford.
TYNDALL, ALBERT HENRY	Ballyanne House, New Ross, Co. Wexford.
TYRRELL, GARRETT CHARLES, M.A. (Dublin)	Ballinderry, Carbery, Co. Kildare.
WANDELEUR, CECIL ERNEST	Windgate House, Greystones, Co. Wick- low.
WERNON, ARTHUR POMEROY ..	1, Wilton Place, Dublin.
WERNON, FANE	Pembroke Estate Office, Wilton Place, Dublin.
WERSCHOYLE, WILLIAM HENRY FOSTER	Woodley, Dundrum.
WARD, SOMERSET, THE HON. . .	Carrowdon Castle, Donaghadee, Co. Down.
WATSON, WILLIAM JAMES	38 and 39, Piccadilly, W.
WEBB, CHARLES	Park Place; Tashinny, Mullingar, Co. Westmeath.
WELPLY, JAMES	65, George Street, Limerick.

WHITE, ARTHUR	99, George Street, Limerick.
WHITE, RICHARD	Estate Office, Gowran, Co. Kilkenny.
WILLIS, GILBERT DE LAVAL	Leconfield Estates Office, Ennis, Co. Clare.
WILSON, ARTHUR JN. DE COURCY	Madresfield Grange, Malvern, Worcester-shire.
WOOD-MARTIN, HENRY ROGER	
BROMHEAD	Cleveragh, Sligo.
YOUNG, GEORGE LAWRENCE.. ..	Randalstown, Co. Antrim.

PROFESSIONAL ASSOCIATES :

BANTON, LUTHER GEORGE	34, Ellesmere Avenue, North Circular Road, Dublin.
CROZIER, GEORGE FRANCIS	Land Agency Office, Ballinasloe, Co. Galway.
DE LA CHEROIS, GEORGE LESLIE ..	Donaghadee, Co. Down.
DUGGAN, CREIGHTON EDWARD ..	1810, 10th Avenue, Grand View, Vancouver, British Columbia.
DUNLOP, CHARLES JOHN, M.R.I.A.I.	2, St. Andrew Street, Dublin.
FOWLER, CHARLES KNOX	Rosslare, Sligo.
GAHAN, ROBERT BERESFORD.. ..	Smithstown House, Castlecomer, Co. Kilkenny.
HARVEY, JAMES MOREWOOD.. ..	Creglorne, Londonderry.
HUTCHINS, RICHARD	Estate Office, Ardnagashel, Bantry, Co. Cork.
MARTIN, ARTHUR	Glencoe, Clareville Road, Rathgar, Dublin.
MOERAN, ARCHIBALD EDWARD ..	Lissadell, Stillorgan Park, Co. Dublin.
MOORE, HUGH ARMYTAGE	Corrie Wood, Castlewellan, Co. Down.
O'REILLY, HENRY JAMES	Sans Souci, Booterstown, Co. Dublin.
PENROSE, EDWARD ALEC	Estate Office, Rose Lane, Waterford.
STEPHENSON, CHAMBRE CORCOR STILLINGTON	Government Survey Department, Colombo, Ceylon.
TAYLOR, GEORGE D.	50, Upper English Street, Armagh.
WARING, HOLT.. .. .	Waringstown, Co. Down.

ENGLISH MEMBERS RESIDENT IN IRELAND.

FELLOWS :

BAGOT, LEWIS BROWN, CAPT. ..	2, Woodhill Villas, Tivoli, Cork.
BARTON, SIR JOHN GEORGE, C.B. ..	General Valuation and Boundary Survey Office, 6, Ely Place, Dublin.
BRUNICARDI, DOMINIC N. . . .	Valuation Office, 6, Ely Place, Dublin.
GREY, CHARLES GREY, M.A. (Durham)	8, Lansdowne Terrace, Ballsbridge, Dublin.
HALL, AUGUSTUS WILLIAM	Valuation Office, 6, Ely Place, Dublin.
HAMMOND, ROBERT WILLIAM, MAJOR	Sun Lodge, Ballintemple, Cork.
HOPKINS, PERCY RAYNES	6, Ely Place, Dublin.
LISNEY, HARRY	6, Ely Place, Dublin.
LYONS, FRANCIS OLIVER, M.A. (Dublin)	6, Ely Place, Dublin.
MILLS, ARTHUR ERNEST	General Valuation Office, 6, Ely Place, Dublin.
PHIBBS, HARRY	6, Ely Place, Dublin.
STEPHENS, JOHN KYLE	13, Donegall Square North, Belfast.
WARWICK, GEORGE ERNEST	Valuation Office, Dublin.

PROFESSIONAL ASSOCIATES :

BURGE, JAMES THOMAS	General Valuation Office, Dublin.
CAMPBELL, NICHOLAS PETERSON . .	Shandon, Serpentine Avenue, Ball's Bridge, Dublin.
CLARKE, LEONARD EUSTACE . .	Ballynolan, Kildimo, Co. Limerick.
EDWARDS, SIDNEY ALBERT	6, Ely Place, Dublin.
GROSER, ARTHUR HUGH	6, Ely Place, Dublin.
HALL, JOHN SEBASTIAN	General Valuation Office, Dublin.
HAZLETT, JOHN JOSEPH	Estate Commission Office, Upper Merion Street, Dublin.
JARVIS, LAURENCE ALFRED	General Valuation Office, Dublin.
LIGHTBOWN, ALFRED STUART . .	General Valuation Office, 6, Ely Place, Dublin.
RYAN, JOHN A., A.M.I.C.E. (Ireland)	Catherine Street, Waterford.
WEBBER, ARTHUR DANIEL MOUTRAY	Mitchelstown Castle, Co. Cork.
WOOD, HUGH REGINALD	6, Ely Place, Dublin.

Members unattached to Provincial Committees.

ISLE OF MAN.

DOUGLAS.

Fellow :

Kerruish : William Maltby.

Professional Associates :—

Kay : Walter Robert.

Teare : Joseph Ernest.

LONDON.

Fellows :—

Abrams : Benjamin Percy.
Adams : Henry, M.I.C.E., M.I.M.E.
Addiscott : Henry Hugh.
Adkin : Benaiah Whitley.
Andrews : John.
Angel : Francis Houghton.
Aris : John Whitton, M.A. (Oxon.)
Arno : Samuel.
Assiter : Harry G.
Ault : Edwin.

Bacon : Frederick Joseph.
Badcock : Philip.
Baddeley : Bernard Beresford.
Baines : Matthew Talbot, M.A. (Cantab.)
Ball : William Alfred.
Bamford : Walter Herbert.
Banks : John William.
Barker : Charles.
Parker : Horace Richard.
Barns : Stephen Allen.
Barrett : James.
Batstone : Rowland Robert.
Batterbury : Thomas, F.R.I.B.A.
Baxter : George.
Beadel : Maurice Frederick.
Beale : Robert John, A.R.I.B.A.
Bedells : Charles Herbert.
Beken : George Kingsnorth.

Fellows :—

Bellingham : Archibald Turner.
Bennett : Thomas Oatley.
Betenson : Frederic Roger.
Beven : Septimus.
Bingham : Alfred John.
Bingham : Frederick Henry.
Bird : Walter.
Blackbourn : Henry.
Blackford : Arthur.
Blake : Edwin Holmes.
Bliss : Thomas Cushway.
Blount : Edward.
Blunt : Montague Cecil.
Bolam : Charles Godfrey.
Bolden : John Leonard, M.A. (Cantab.)
Bond : Douglas Vale.
Booker : Algernon Erskine.
Booth : Gilbert William.
Boulting : Frederick Edward.
Bowditch : John.
Boyd : John Jermyn.
Boyton : Bertram Alfred.
Breach : Benjamin T'Anson.
Breeds : Arthur Owen.
Brereton : Franc Sadleir, F.R.I.B.A.
Brereton : Thomas Bloomfield Sadlier.
Bressey : Charles Herbert.
Briant : Robert.
Brickwell : Alfred James.
Brighton : George Lawrence.
Brinsley : Herbert George William.
Brooks : Charles William, A.R.I.B.A.

LONDON—continued

Fellows :—

Brooks : John McMullen.
 Brooks : Phillip Fuller.
 Brown : Alexander Burnett.
 Brown : Frederick.
 Brown : George Turville.
 Brown : William Henry.
 Browne : Flint.
 Bruce : Robert Knight.
 Buckland : Alfred Virgoe.
 Buckland : Henry Duneau.
 Buckland : Sidney Crawford.
 Bull : Walter.
 Burgess : Henry Herbert Philip.
 Burkett-Smith : Cecil Sydney.
 Burmester : John William Stanley,
 F.R.I.B.A.
 Burnett : Sir David.
 Burr : Edmund John.
 Burr : Thomas Arnold.
 Burroughes : Thomas Henry.
 Burton : Reginald Robert
 Bushell : Henry.

Cable : James M., A.R.I.B.A.
 Caesar : Charles Edward
 Castell : Charles Smith.
 Castle : Sydney Charles Courtenay,
 A.I.C.E.
 Castle : William Henry Baldwin.
 Chambers : Theodore Gervase.
 Chandler : John.
 Chappell : Frank Richardson.
 Charles : Richard Stafford.
 Cheney : Edwin John, M.A., M.R.A.C.
 Chesterton : Frank Sidney.
 Chesterton : Sidney James.
 Chesterton : Sidney Rawlins.
 Cheston : Horace, F.R.I.B.A.
 Child : Fred.
 Chinnock : Frederick George,
 Member of Council.
 Christy : Archibald Ernest.
 Clare : Edward Lovell.
 Clark : Samuel.
 Clarke : Ernest Seymour.
 Clarke : George Ernest.
 Clarke : Howard Chatfield, F.R.I.B.A.,
 Member of Council.
 Clarke : Percy Henry.
 Clarke : Stanley Chatfield.
 Clarkson : John, F.R.I.B.A.
 Clarkson : William.
 Clarkson : William, Jun.
 Clifton : William Edward, F.R.I.B.A.
 Clutton : John Henry.
 Clutton : Ralph.
 Cobb : Herbert Mansfield.
 Cole : Francis Joseph.

Fellows :—

Cole : Herbert Covington.
 Collier : Henry Hewett.
 Collingham : John Cyril Lees.
 Collins : Herbert William.
 Collins : Marcus E.
 Commin : Frederick James.
 Conder : Alfred, F.R.I.B.A.
 Cook : Frederic William.
 Cooke : Henry.
 Cooper : Arthur John.
 Cooper : Harry Thomas.
 Cooper : John Robert.
 Cope : Henry James.
 Corderoy : George.
 Cranfield : William Bathgate.
 Creswell : William Thomas, Lic.R.I.B.A.
 Cronk : Edwyn Evans.
 Cronk : Frank.
 Cross : Arnold Charles Martin.
 Cross : Arthur George.
 Cruwys : Robert.
 Cullen : Felix Victor.
 Cundy : Henry I.
 Currey : Percivall, F.R.I.B.A.,
 Honorary Secretary.
 Curtis : Robert Leabon.
 Cutler : George Alfred.
 Cuxson : George Austin Pryce,
 A.R.I.B.A.

Dadd : Charles John Thomas.
 Dadson : Reginald Thornton.
 Dangerfield : Thomas Samuel.
 Darch : John.
 Dash : Roland Ashford.
 Daubney : Charles Archibald, A.R.I.B.A.
 Daidge : William Robert, A.M.I.C.E.,
 A.R.I.B.A.
 Davis : Charles James.
 Daw : William Herbert.
 Deacon : Thomas Mark.
 Debenham : Frank Bridgewater.
 Debenham : Frank Gissing.
 Debenham : Frederic Kersey.
 Debenham : Horace Bentley.
 Dendy : William Cooper.
 Dinwiddy : Conrad Hugh.
 Dinwiddy : Donald.
 Dinwiddy : Thomas, F.R.I.B.A.
 Doll : Charles Fitzroy, F.R.I.B.A.
 Dollar : Peter, A.R.I.B.A.
 Done : John James.
 Downing : Frederick.
 Downing : Henry Philip Burke,
 F.R.I.B.A.
 Driver : Arthur Charles.
 Drower : Edmund Gilbert.
 Drower : John Edmund.

LONDON—continued

Fellows :—

Drury : Edward Dru, F.R.I.B.A.
 Dudley : Edgar.
 Duncan : James Morison.
 Dunn : Sir William Henry.
 Dunsmore : Gilbert.
 Durbidge : Ernest.
 Durlacher : Alexander Percy, M.I.C.E.
 Dyball : Harvey.
 Dyer : William John.

Eason : Edward William.
 Egerton : Hubert Decimus.
 Eiloart : Frederick Edward.
 Elgood : Frank Minshull, F.R.I.B.A.
 Ellis : Alfred Cave.
 Ellis : Frederick.
 Ellis : Herbert Moates.
 Ellis : Ralph Staples.
 Ellis : Richard Adam.
 Elton : Herbert Averill, Major.
 Emery : Arthur James, Major.
 Eve : Herbert Trustram.
 Eve : William.
 Eve : William Harold.
 Everington : John.

Fagg : Edwin William.
 Farmer : Hugh Cecil.
 Farnan : Henry Richard.
 Farrer : Frederick Robert.
 Farthing : Walter Thomas.
 Field : Charles Roland.
 Fitt : Harry Charles.
 Fletcher : Banister Flight, F.R.I.B.A.
 Fletcher : Herbert Phillips, F.R.I.B.A.,
 A.M.I.C.E.
 Fleuret : Alfred Harman.
 Flint : William Hurst.
 Ford : Lawton Robert.
 Ford : Solomon, A.R.I.B.A.
 Foster : James Herbert Furnmedge.
 Fowler : Alfred Charles Stanley.
 Fox : Edwin.
 Fox : Sidney Joseph.
 Frampton : Alfred, A.R.I.B.A.
 Francis : George Futvoye.
 Francis : Leon Albert.
 Franklin : Arthur Thomas.
 Freeman : Sydney.
 French : Cecil George.
 Freyberg : Herbert.
 Fry : Joseph Harry.
 Funnell : Horace Frederick.

Gairdner : Edward James.
 Gale : Arthur John, F.R.I.B.A.

Fellows :—

Gale : Ernest Sewell.
 Galsworthy : Frederick Thomas.
 Gamble : Sidney Gompertz, A.M.I.C.E.
 Gandy : James.
 Garrard : Arthur Norman.
 Garrood : Thomas William M.
 Gate : Alfred Joseph.
 Gate : Henry Arthur Armytage.
 Giddy : Osman Horton.
 Gilbert : William Henry Sainsbury.
 Gilbert-Lodge : Edward Morton.
 Glasier : Edward Brougham.
 Glead : Percival Francis.
 Glead : Richard Cummings.
 Glover : Henry Alexander.
 Goodchild : Josiah.
 Goodchild : Walter Charles.
 Goodman : Alfred.
 Goodwyn : Leonard William.
 Gordon : Alexander.
 Goulding : Arthur.
 Gover : Arthur Sutton, F.R.I.B.A.
 Gray : Horace Norman.
 Green : Edmund Horace.
 Green : Frederick Algernon.
 Gregory : Alfred, Major.
 Grellier : Harley Mair.
 Griffin : Alfred.
 Griffin : Harold.
 Griggs : Robert, A.R.I.B.A.
 Grogan : Henry Thomas.
 Grose : Vincent John, F.R.I.B.A.
 Grover : Arthur.
 Groves : Arnold Tudor.

Hale : Raymond Henry.
 Hall : Francis Samuel.
 Hall-Jones : Frederick.
 Hallett : William Brown.
 Hammond : Frederic Snowden.
 Hampton : Geo. Frederick Wm
 Hansell : Reginald Goddard.
 Hardcastle : Fredk. Henry
 Appleton, A.R.I.B.A.
 Harrison : Frederick Walter.
 Harrison : George John Robertson.
 Harston : Arthur.
 Haskins : William Albion.
 Hayward : Thomas William Alfred
 A.M.I.C.E., M.I.M.E.
 Head : John George.
 Healing : Oswald Judd.
 Heath : Henry.
 Heath : Henry Cubitt.
 Heath : John Lionel.
 Heelis : William.
 Hendriks : Henry.
 Henniker : Frederick Sibert.
 Heward : Ernest James.

LONDON—continued.

Fellows:—

Hibbert: Joseph Victor.
Hickson: Stephen Westby.
Higgins: George.
Hilton: John.
Hine: George Thomas.
Hoare: Arthur John.
Hobson: Frederick William.
Hodges: Arthur Pool.
Hodgson: Harry Moore.
Hodson: William.
Holl: Mackintosh Meleng.
Holland: Thomas James, Jun.
Holman: George Edward.
Holmes: Montagu.
Holmes: Montagu Price.
Hood: Herbert Charles.
Hood: Walter Richard.
Hope: Arthur Ernest.
Hopkins: Alfred James.
Horne: W. Edgar, M.P.,

President.

Horsey: Frederick John Terry.
Horsfield: John Nixon, A.R.I.B.A.
Houghton: Thomas Marcus.
Houghton: William.
Hovenden: Henry Edward.
Howland: Arthur Frank.
Hudson: Arthur Byrne.
Hugman: Charles Eady.
Hunnings: Arthur.
Hunt: Frank William.
Hunt: Frederick Cope.
Hunt: Frederick William H.,
F.R.I.B.A.
Hunter: Cecil.
Huson: Ernest William.

I'Anson: Edward Blakeway, F.R.I.B.A.,
Member of Council.
Inman: Marshall Nisbet.

Jacob: Louis, A.R.I.B.A.
James: Frederick John.
James: George Ernest.
James: Merton John.
Jarman: Frank Wilmot.
Jeffree: Sydney.
Jenkinson: William Eric Leigh.
Jenkinson: William Wilberforce.
Jennings: Fitz-Laurence Percival
Dudley.
Jerome: Thomas Stroud, L.S.O.,
Lieut.-Col.
Johnson: Bernard Marr.
Johnson: Henry.
Johnson: Henry James.
Johnston: Reginald.
Jonas: Harold Driver.
Jonas: Harry Marshall.
Jonas: Henry.
Jonas: Robert Collier.
Jones: Charles, M.I.C.E.
Jones: Charles Frederick.

Fellows:

Jones: Ernest Joel.
Jones: Henry Arthur.
Jones: John Arthur.
Jones: John Fox.
Jones: Thomas, M.I.C.E.
Joseph: Delissa, F.R.I.B.A.

Kearns: Robert Matthew.
Keirle: Robert, F.R.I.B.A.
Kersey: Alexander Henry, F.R.I.B.A.
Kirk: John Wright.
Knight: Edgar Walsh.
Knight: Frederick William.
Knight: George Edward.
Knowles: George Potter, A.M.I.C.E.

Lake: Cuthbert Joseph.
Lake: Ralph Julian.
Lambert: Arthur John.
Lambert: Godfrey Charles
Lancaster: John Roy.
Lang: Charles Augustus.
Lawrance: Walter.
Lawrence: William Robert.
Leake: Robert.
Leaning: Aubrey Rupert Sidney.
Leaning: Henry John.
Leaning: William Arthur.
Lee: Frederick.
Lee: John Wilfrid.
Leest: Frederick Charles.
Leslie: Henry George, A.R.I.B.A.
Lightfoot: Francis Lowry, B.A. (Oxon.)
Lloyd: Donald.
Lofts: Henry Fairlam.
Long: Leland.
Lovegrove: Henry, A.R.I.B.A.
Luker: Dyneley.
Lyon: Michael Lewis.

Madge: Wilfrid.
Maltby: Charles Midlam.
Mann: Charles John.
Mann: James Bagshaw
Mann: Robert Bagshaw.
Marks: Hyman.
Martin: George Dennis.
Martin: Howard.
Past-President.
Martin: Samuel.
Mason: Charles William Hayley.
Masterman: George Hughes.
Mathews: Joseph Douglass, F.R.I.B.A.
Mayhew: Robert Henry Jewers,
A.R.I.B.A.
Mellenfield: James Henry.
Mellor: Thomas Henry.

LONDON—continued.

Fellows :—

Melrose : Frank.
 Mercer : Charles Edward.
 Messenger : Henry.
 Middleton : Reginald Empson, M.I.C.E.
 Mixer : Edward.
 Monckton : Henry Percival, F.R.I.B.A.
 Monier-Williams : Stanley Faithfull,
 A.R.I.B.A.
 Monson : Edward Charles Philip,
 F.R.I.B.A.
 Montagu : Henry Havelock.
 Moody : Thomas.
 Moore : Alfred.
 Moore : Harold Edward.
 Moore : Thomas Ivor.
 Morris : Harold George.
 Morris : Richard Percival.
 Moss : Thomas Walter.
 Muller : John Joseph, A.R.I.B.A.
 Mundell : Joseph Edward, A.R.I.B.A.
 Mundy : Thomas Edward, A.R.I.B.A.
 Murray : William.

Neale : George James.
 Neighbour : William Francis.
 New : Edward Vorley, A.R.I.B.A.
 Newman : Arthur Harrison, F.R.I.B.A.
 Newman : Bernard.
 Newman : Samuel Frank.
 Newmarch : Henry Charles.
 Newton : Harry Carss.
 Newton : Edwin Bennett Brierley,
 M.I.C.E.
 Newton : James William.
 Nicholson : Guy Murray.
 Nicholson : William Abernethy
 North : George.
 Northcroft : Henry.
 Norton : Thomas Herbert, B.A. (Oxon.)
 Notley : Richard Albert.
 Notley : Robert Pledge, F.R.I.B.A.
 Nottage : William Griggs.

Oakley : Christopher Percival.
 Oakley : John Hubert,
Member of Council.
 Ogden : Michael Guy.
 Orgill : John Berwick.
 Ovenden : Charles.
 Ovenden : Harry.
 Overall : Edmund.

Page : Robert, F.R.I.B.A.
 Palmer : Frederick Charles Richard.
 Palmer : William Edward King,
 A.R.I.B.A.
 Parker : Charles Alfred.
 Parker : Stanley.
 Parker : Thomas

Fellows :—

Parkhouse : Samuel.
 Parnacott : Alfred.
 Parnwell : Sidney Arthur.
 Parr : Samuel George.
 Parry : Albert Edward.
 Parry : Richard, B.Sc. (Lond.),
 A.M.I.C.E.
 Partridge : Edward John.
 Paul : Andrew.
 Paull : Alan.
 Payne : Alexander, F.R.I.B.A.
 Pearson : Harry John, A.R.I.B.A.
 Pease : Charles Edward.
 Pepler : George Lionel.
 Pidditch : Philip Edward.
 Pinder : Richmond.
 Pineger : James Reginald.
 Pinks : Edwin Charles.
 Porter : Oliver John.
 Potter : Herbert George.
 Powell : Frederick Atkinson,
 F.R.I.B.A.
 Preston : Samuel David.
 Price : Richard Arnold.
 Prickard : Thomas Francis Vaughan.
 Pridmore : Albert Edward.
 Pridmore : Arthur Stirling.
 Pritchard : Herbert Alfred.
 Protheroe : Alfred Ernest.
 Purchase : Edward Keynes.
 Purvis : Charles James.

Rawlins : Henry Adair, A.R.I.B.A.
 Rawlins : William.
 Read : Francis Charles Jenning.
 Read : Walter Herbert.
 Reed : Richard George Gordon.
 Rees : William Andrew.
 Remnant : Archibald Charles.
 Rex : Francis Herbert.
 Richards : Walter Rowe.
 Richardson : Arthur Bayliffe.
 Richardson : Oliver Archer.
 Rickman : Thomas Miller, A.R.I.B.A.
Past-President.
 Riddle : Frederick Henry Brimble.
 Ridley : Percy Edward.
 Roberts : Charles Quincey.
 Robertson : Clement Albert.
 Robins : Philip Seymour.
 Robinson : Professor, Henry, M.I.C.E.
 Robinson : Henry Herbert.
 Robinson : Theodore Richard.
 Robson : Edward Robert, F.R.I.B.A.
 Roddick : Andrew.
 Rogers : Frederic James.
 Rogers : Horace Mordaunt.
 Rogers : Leonard Neville.
 Rolleston : Sir John Fowke Lancelot,
 M.P.
Past-President.
 Roods : Alfred.
 Ross : Percy Havery.
 Ruault : John Gustave Peter.

LONDON—continued.

Fellows :—

Ruddle : Frederick Charles.
 Rüntz : Ernest Augustus.
 Rushworth : Edmund Walter.
 Rutley : Charles.
 Rutley : Frank.
 Ryan : William Patrick.
 Ryde : Arthur Lyon,
Member of Council.

Sabin : Joseph Henry.
 Sadler : George William, A.R.I.B.A.
 St. Quintin : Perry.
 St. Quintin : Richard Samuel.
 Sandell : Stanley Lunau.
 Saunders : Arthur Percival.
 Saunders : Charles Herbert.
 Saunders : Martin Luther, A.R.I.B.A.
 Saunders : Samuel Brown.
 Savill : Alfred.
 Savill : Edwin.
 Savill : Henry Norman.
 Sayer : George William.
 Sexton : George Alexander.
 Shackle : Edward Neild.
 Sherwin : Joseph Henry.
 Shone : Isaac, A.M.I.C.E.
 Shoppee : Charles Herbert, F.R.I.B.A.
 Silcock : Edward John, M.I.C.E.
 Silvester : George.
 Single : Arthur.
 Skipper : Henry Herbert.
 Skitt : Arthur.
 Skrimshire : Samuel.
 Slade : James Benjamin.
 Slater : Charles Frederick.
 Smallman : Harry Richard George
 Strong.
 Smith : Charles Gordon.
 Smith : Edward.
 Smith : Frank Adams, F.R.I.B.A.
 Smith : Frederick Robert.
 Smith : Quentin Cullen.
 Smith : Percy Pyne Caldecott.
 Smith : Sydney Arthur.
 Snelling : Henry.
 Spensley : James Calvert.
 Squarey : Newell William Pitts.
 Squire : Richard.
 Standen : Arthur C.
 Stanford : George.
 Stanger : Samuel Arthur.
 Stanton : Frederick William
 Schultheiss, A.M.I.C.E.
 Stenning : Sir Alexander Rose,
 F.R.I.B.A., *Past-President.*
 Stephenson : Charles William.
 Stevens : Charles Vivian.
 Stevens : John James.
 Stevens : John William, A.R.I.B.A.
 Stevenson : Edmund Herbert, M.I.C.E.
 Steward : Clifford Thomas.
 Steward : Herbert Thomas,
Past-President.
 Stone : Edward Albert.
 Stoner : Alfred.

Fellows :—

Strachan : Charles John.
 Strouts : Lewis Herbert.
 Strudwick : Hayward James.
 Strutt : The Hon. Edward Gerald,
Vice-President.
 Sutton : Frederick Stanley.
 Swain : Ernest.
 Swain : Frank.
 Symmons : Percy James.

 Tanner : Sir Henry, C.B., I.S.O.,
 F.R.I.B.A.
 Tapp : Arthur.
 Taylor : Arthur William.
 Taylor : John Herbert.
 Taylor : John James.
 Taylor : Richard Frederick.
 Tee : Samuel Clifford.
 Theobald : Henry Wells Dewhurst
Member of Council.
 Theobald : John Medows.
 Thomas : Charles John Howell.
 Thompson : Arthur Edward.
 Thompson : Sir Robert James,
Member of Council.
 Thwaites : George Percy.
 Thynne : Guy Harry.
 Tootell : Richard William.
 Trafford : Frederick Charles.
 Trehearne : Alfred Frederick Aldridge.
 Trent : William Edward.
 Trollope : Charles George N.
 Trollope : Henry Charles.
 Trumper : John Alfred.
 Tubbs : Walter Burnell.
 Tuckett : Percival Fox.
 Turner : Alexander Henry.
 Tyler : James William.

 Upsdale : Andrew Reed.

 Vaizey : John George.
 Veale : Louis Charles.
 Vernon : Arthur,
Past-President.
 Vernon : Arthur Stanley.
 Vigers : Astley Allan.
 Vigers : Leslie Robert,
Past-President.
 Vigers : Martin.
 Vigers : Robert,
Past-President.

 Wadling : Henry John, F.R.I.B.A.
 Wagstaffe : Thomas Rogers.
 Wakeford : Arthur James.
 Walcott : Lyons Roden Sympton.
 Waldram : Percy John.
 Walker : Samuel.
 Walmisley : Arthur Thomas, M.I.C.E.

LONDON—continued.*Fellows :—*

Walsh : Frederick Leopold Morfee.
 Ward : George.
 Warmington : Herbert Andrew
 Cromartie.
 Warner : William Henry.
 Waters : Frederick Ebenezer.
 Watney : Daniel,
 Past-President.
 Watney : Dendy.
 Watson : Ernest.
 Weaver : William, M.I.O.E.
 Webber : William Henry.
 Webster : Hugh Calthrop.
 Wells : William Henry.
 West : Charles Henry Edward.
 West : Herbert James.
 Weston : Francis.
 Wheatley : Stephen Gladstone.
 Wheeler : Francis West.
 White : Benjamin William.
 Whiteley : Charles Percy.
 Whittaker : John Dronsfield
 B.A. (Cantab.)
 Whitten : George Jackson.
 Wigram : Reginald Spencer.
 Wilkins : William.

Fellows :—

Williams : Arthur Codrington.
 Williams : Henry Cuthbert.
 Williams : William Herbert.
 Willis : Edward.
 Wilson : Frederick Robert.
 Wonnacott : Ernest Wm. Malpas,
 A.R.I.B.A.
 Wontner-Smith : Percy.
 Wood : Charles Bruce.
 Wood : Douglas, A.R.I.B.A.,
 Wood : John Daniel.
 Wood : John Edward.
 Wood : John Guy.
 Woodward : William, F.R.I.B.A.
 Wreathall : Robert T.
 Wright : George Thomas Green.
 Wright : Herbert Alfred.
 Wrightson : Arthur Frederick.

Young : Andrew.

Member of Council.

Young : Charles Alexander.
 Young : Douglas.
 Young : Morgan Henry.
 Young : Thomas.

LONDON—continued.

Professional Associates :—

Adams : Gerald James Frederick.
 Adams : Herbert.
 Alderson : Charles Henry.
 Allen-Lodge : Albert Robert.
 Allen : Oliver Wylie.
 Allpress : Horace Edward.
 Allsop : Benjamin Geo. Kidston.
 Andrews : Ronald Seymour.
 Andrews : Stephen Hampton.
 Arnold : Arnold Keith.
 Arthur : Henry Edward.
 Ashbridge : Prentice Moore.
 Atkin-Berry : Herbert Courtenay.
 Atkinson : Clifford Garnett.
 Ayliffe : Walter Sydney.

Bagnall : Edward George.
 Baker : Alfred James.
 Ball : James Benjamin.
 Ball : James Robert.
 Ball : Victor Henry.
 Banks : Edward John Stanley.
 Barclay : Robert Herman.
 Bare : Arnold Edwin.
 Baring : Arthur.
 Barker : Herbert Graham.
 Bartholomew : Charles Frederick.
 Barton : Sydney Frederick.
 Bates : Arthur Roger Albert.
 Batstone : Walter Waterfield.
 Batterbury : Norman Boniface.
 Batzer : Albert Edward.
 Bax : William Molyneux.
 Baxter : Arthur Sunderland.
 Baxter : George Coulson.
 Bayden : Edward.
 Baylis : Albert Edward.
 Beaumont : John Edmund.
 Bedford : Charles Edgar.
 Bedford : Reginald Lewis Joshua.
 Bedwell : Ernest Charles.
 Beken : Reginald Walter.
 Bell : Oswald.
 Bentley : Arthur Waterhouse.
 Bentley : Harold Edwin.
 Berry : Algernon Lawrence.
 Berry : Henry Frank.
 Bettger : Harold Alfred.
 Bettridge : Sidney Woodward.
 Bevan : Roland Stanley.
 Bevington : Ernest.
 Bickford : Joseph Grant.
 Bilson : Charles Frederick.
 Bishop : Ernest William.
 Bingham : William Raper.
 Binns : Henry William.
 Bird : Augustus Gordon.
 Blackshaw : Charles.
 Blessley : Victor Henry.

Professional Associates :—

Bliss : Francis George.
 Blow : Thomas Bertram.
 Blyth : Harold King.
 Boden : Harold Casswell.
 Boden : Maurice.
 Bosher : Victor Evans.
 Boulton : Charles Valentine.
 Bousfield : Edwin Vaughan Davenport.
 Boustred : Henry Norman.
 Bowen : Edward Beddoe.
 Bower : Thomas Hawkesley.
 Bradford : Daniel.
 Brand : Edmund.
 Brent : Thomas.
 Brewer : Horace George Charles.
 Briant : Bernard.
 Brigden : William Ernest.
 Briggs : Alfred Denbigh.
 Briggs : John.
 Brimacombe : Charles Seymour.
 Bristow : Benjamin Frankland.
 Bristow : William.
 Broad : Gordon Leslie.
 Broad : Sydney Lowther.
 Brown : Arthur Frederick.
 Brown : Norman Ernest.
 Brown : William Alfred.
 Brown : William Edward.
 Brown : Wm. Lobin Trant.
 Browne : Hugh Gillespie.
 Browning : Egbert George.
 Bruzard : Sidney John.
 Bull : Thomas Henry.
 Burch : Herbert.
 Burge : Arthur John.
 Burn : Joseph.
 Burnett : Leslie Trew.
 Burr : Frederick Malcolm.
 Burrows : Edward Crawford.
 Burrows : Percy Charles.
 Buss : Fleetwood George William.

Carew : Cyril Joseph Theodore.
 Carey : James.
 Carey : William Henry.
 Carlisle : William Joseph.
 Carr : Herbert Francis.
 Carter : John Edward.
 Cass : Alexander James.
 Cassin : Charles Langa.
 Castell : Douglas Charles.
 Caton : Thomas Linfield.
 Chalcraft : Henry Terrell.
 Chamberlain : Benjamin.
 Chamberlain : Charles.
 Chapman : Arthur Henry.
 Chapman : Charles Albert.
 Chapman : John Frank.
 Chapple : John Graddon.
 Chaudoir : Gustave Felix.
 Chew : Percival Thomas.

LONDON—*continued.**Professional Associates:—*

Chew: Richard.
 Chilcott: Arthur Samuel Fairweather.
 Child: George Malcolm.
 Chipp: George.
 Church: Geoffrey Redmore.
 Clark: Alfred Henry.
 Clark: Charles Fowler.
 Clark: Cuthbert Harvey.
 Clark: Henry Denton.
 Clark: Herbert.
 Clark: Louis Van.
 Clarke: Alfred Howard.
 Clarkson: John
 Coade: Cecil James.
 Coates: Laurence Calvert.
 Cobb: Henry Alfred William.
 Cocke: Edmund Sidney Dean.
 Coker: Harry Reginald Ellis.
 Collier: Arthur Charles.
 Cook: Horace Herbert.
 Cooke: Frederick Roper.
 Cooke: Lionel.
 Cooper: Bertie.
 Cope: William George.
 Cox: Douglas Harold.
 Cox: Victor Jennings.
 Crabb: Arthur Horace.
 Cregeen: Hugh Stowell, Jun.,
 A.M.I.C.E.
 Cresswell: John Theodore Ross.
 Cromie: Robert.
 Crook: Hollis Augustus.
 Crosher: William Samuel.
 Cross: Clement.
 Crump: Harold.
 Cubitt: Ernest James.
 Cubitt: Horace William, A.R.I.B.A.
 Cudlipp: William.
 Curtiss: Edward Herbert.
 Cushen: Charles Osmon.
 Cutler: Frank Sydney.
 Cutler: Henry Isaac.
 Cutts: Edward James.

 Dabbs: Douglas William.
 Dafforn: George Bertie.
 Dallimore: Norman Edward.
 Dampney: Cyril John.
 Dannatt: Percy Boothroyd.
 Davenport: Herbert.
 Davidson: David Alexander.
 Davies: Edward Owen.
 Davies: Leonard Owen.
 Davis: Arthur Henry.
 Davis: Cecil Wallace.
 Davis: William Arthur.
 Davison: Louis James.
 Davson: Alan Warburton.
 Daw: Herbert Warwick.
 Dawkins: Albert James.
 Day: Joseph Reynolds.
 Dean: Edward Harold.

Professional Associates:—

Dickie: Albert George.
 Dickens: Basil.
 Dixon: Francis Evelyn.
 Dodgshon: Edmund Charles.
 Doxat-Pratt: Bernard Edwin.
 Drake: Frank Arthur.
 Drew: Walter Hubert.
 Dunn: William.
 Dunt: John Harlow.
 Durant: Frederick Henry.
 Dyer: William Fanstone.

 Eastman: Archibald Garey.
 Easton: Walter John.
 Eden: Frederick Stewart.
 Edwards: Thomas Henry.
 Eiloart: Cyril Howard.
 Eiloart: Ferdinand Robert.
 Ellis: George Edward.
 Ellis: Rae Adam.
 Ellyatt: George Frederick.
 Elsworthy: John Gordon.
 English: Harry Edwin.
 Ernrich: Henry.
 Evans: Bertie Graham.
 Evans: Edwin Dudley.
 Evans: Montagu.
 Everett: Arthur Sherman.
 Ewen: Reginald Malcolm.
 Ewin: Henry Hamilton.
 Eyles: Charles Henry.

 Fairminer: William James.
 Fairweather: Norman Blumer.
 Falkner: Frank Ninus.
 Farrer: John Camplin.
 Fentum: Charles Alfred.
 Few: Harry Garrard.
 Fielding: Arthur Edward Bruce.
 Finch: George Frederick.
 Fisher: Robert.
 Fitness: John Francis.
 Flatt: John Alexander.
 Fleming: Herbert Sidney.
 Fletcher: George Rivers.
 Ford: Richard Dickens Lancelot.
 Ford: C. Graham.
 Forge: Raymond James.
 Foster: Edward Chas.
 Foster: Gaius.
 Foster: Henry Helm.
 Foster: Walter.
 Foster: William Frederick.
 Fowler: Cyril James.
 Fowler: Frank Archibald.
 France: Arthur Stanley.
 Francis: Bernard.
 Freeman: George.
 Furber: Henry Aubrey.

LONDON—continued.

Professional Associates :—

Galsworthy : Vincent Somers.
 Gardner : Paul Silvester.
 Garrett : Arthur Berry.
 George : Frederick Albert.
 Gerrard : George.
 Gibson : Frank Speeding.
 Gifford : Egmont Augustus.
 Gilbert : John Sainsbury.
 Gilbert : Samuel Howell.
 Gilbert-Lodge : Leicester James
 Garfield.
 Gilks : Stephen Langton Clowes.
 Gillett : Edward Bailey.
 Girven : Frederick William.
 Gleed : Herbert Alexander.
 Glenn : George Frederick.
 Goadby : Joseph Stubbins.
 Goddard : Frederick Brokenshire.
 A. M. I. C. E.
 Goodwin : Henry Ernest.
 Gore : William Joll.
 Gould : Harmer.
 Coulter : Arthur Christopher.
 Gowland : Stephen Leversha.
 Graham : Henry Cecil.
 Grant : Leslie Thomas.
 Gray : James Arthur.
 Green : James Henry Townsend.
 Greenop : Edward, A. R. I. B. A.
 Greenwood : Ernest.
 Grey : George Willis.
 Griffin : Harold, Jun.
 Griffith : Frank Stanley.
 Gripper : John Bell.
 Grellier : Gordon Harley.
 Grogan : Harold Keith.
 Grogan : Richard Lawrence Remy.
 Grout : Perry.
 Grove : Richard Thomas.

Hall : Montague Preston.
 Hall : Sidney.
 Hall : Vernon Manning.
 Halls : Christopher Walter.
 Hallam : Frank Vincent.
 Hamilton : John Paynter.
 Hamlyn : Eric Henley.
 Hammond : George Addison.
 Hannon : John Michael.
 Harding : Frederick Allcroft.
 Hards : John Frederick Stanley.
 Hardy : Ernest Carlisle.
 Harris : Charles Francis Norman.
 Harris : Douglas.
 Harris : Edward Charles.
 Harrison : William.
 Hassett : Reginald Charles.
 Hay : William George.
 Haybittle : Richard William.
 Hayton : James Dawson Wray.
 Hayward : Arthur Baldwin.

Professional Associates :—

Head : William Alfred.
 Healy : Harry Prince.
 Heath : Sidney Howard.
 Hebden : Francis Radcliffe.
 Hebden : George Radcliffe.
 Heckford : Harley.
 Hedger : Arthur Constantine.
 Heeley : Joe.
 Hellicar : George Thomas.
 Henderson : Percy Charles.
 Hendra : Albert John.
 Hennell : Charles Murray.
 Henry : Edward Hugh.
 Henson : Frederick Jasper.
 Hewitt : Frank.
 Hickmott : Henry Charles.
 Hicks : Stanley, *Professional
 Associate of Council.*
 Hicks : William Rooke, A. M. I. C. E.
 Hider : Sydney William.
 Hine : Ernest Daryll.
 Hinton : Herbert Arthur.
 Hobson : Frederick Vachell.
 Hobson : Reginald Beresford.
 Hodges : William Westcott.
 Hodson : Frederic Henry.
 Hodson : Laurence Scrivener.
 Hoile : Gerald John Harwood.
 Holford : Shelley.
 Holmes : John Edward
 Holt : Edward.
 Home : Philip Woollatt.
 Hooper : Harold Thomas.
 Horder : Gerald Morley.
 Hosgood : Ralph Brian.
 Hovenden : Jack Reginald.
 How : Herbert.
 Howard : Edmund.
 Howell : Ernest John
 Howland : George.
 Huckstep : John Edward.
 Huggins : Ernest George.
 Hughesdon : Gerald Edward.
 Hutton : Frederic Norman.

Inskipp : Arthur.
 Isard : Ernest.
 Isitt : Frederick Harvey.

Jackson : Stanley Richardson
 James : Herbert Cecil.
 James : William George.
 Janes : Walter Joseph.
 Jaques : Thomas Arnold.
 Jeffery : Francis Wilson.
 Jenkinson : Samuel Stewart.
 Jennings : William Alfred.
 Jonas : Samuel Marshall.
 Jones : Arthur Bayly.
 Jones : Charles Thomas.

LONDON—*continued.**Professional Associates :—*

Jones : Percy Everley.
 Jones : Walter George.
 Jordan : George Henry.
 Jull : William Vincent.

 Keay : Raleigh William McLaren.
 Keele : John Daniel.
 Kelly : Arthur Ralph.
 Kemsley : Norman Bolton.
 Kemsley : William Hugh.
 Kennett : Charles Arthur.
 Ketteringham : Sydney.
 Kibblewhite : Henry James Treleaven.
 Kift : George Ansley.
 King : Frederick Augustus.
 King : Herbert James.
 Kingston : Archibald Lawrence.
 Kinton : Harold Ernest.
 Kisch : Augustus Maitland.
 Kislingbury : Arthur Vernon.
 Klosz : Hubert John.
 Knibb : Frederick Charles.
 Knight : Robert Maltman.
 Knowles : Joseph Bertram.
 Kohler : Hans.

 Ladd : Walter Willoughby.
 Lamprill : William Thomas.
 Lang : Augustus Bernard Dashwood.
 Langford : Douglas Charles.
 Lansdown : George Arthur.
 Large : John Gerald.
 Larkin : Richard Webster.
 Latham : Thomas Selby.
 Laurence : Walter Bernard.
 Lavarack : Hamlett Unitt.
 Lawley : George Frank.
 Lawrance : John, Jun.
 Lee : William Richard.
 Leigh : Vincent Stanley.
 Lemmoin-Cannon : Henry.
 Leonard : Edward.
 Lewis : Arthur Llewelyn.
 Lickis : Leonard.
 Lightfoot : John George.
 Line : Henry William.
 Little : Henry.
 Living : Charles, Jun.
 Loades : Frank Charles.
 Lockyer : Edward Herbert.
 Loe : Sydney John.
 Lomax : Ernest George.
 Lovegrove : Charles Gresham.
 Lowe : Charles Robert.
 Lucas : Joseph.
 Luck : George Edward.
 Luffingham : William John.
 Lumley : Edward Adrian.

Professional Associates :—

Macer : Alfred Thomas.
 Machattie : John Macintosh.
 Mackenzie : Henry Blinman.
 McSheehy : John Edward Gerald.
 Mager : Sydney.
 Mallett : John Graham.
 Mann : Alfred Henry.
 Marcus : William Mortimer.
 Marks : Thomas Edward.
 Martin : Alexander Wm.
 Martin : Harrison.
 Martin : Moritz Richard.
 Maslen : Thomas Patrick Vincent.
 Mason : Francis Scott.
 Maskell : Reginald.
 Matthias : Alfred Alexander.
 May : William Stokes.
 Mayhead : Basil Stuart.
 Meredith : Percy William.
 Merrett : Harold Thrift.
 Merrett : James.
 Miller : Frederick William.
 Mills : Basil Rupert.
 Milne : James Logie.
 Milne : William Edward Streatfeild.
 Milnes : Robert.
 Mirams : Arthur Edward.
 Moat : Ernest William.
 Molyneux : Frank Eustace.
 Moore : Ernest Llewellyn.
 Moore : Richard Charles.
 Morgan : Ernest William.
 Morgan : Harold Woosnam.
 Morgan : Thomas Edward.
 Morris : Alexander George.
 Mullett : Henry Thomas.
 Mumby : Elvin Fowler.
 Mumford : Frank Septimus.
 Murray : Arthur Malcolm.

 Newbery : George Herbert.
 Newman : Henry Arthur, A.M.I.C.E.
 Newman : Walter Philip.
 Nicholson : Ebenezer.
 Noble : Walter Hubert.
 Norman : Charles Frederick.
 North : Mark Frederick.

 Offlow : Arthur Rowland.
 Oppenheim : Alfred.
 Orr : Robert.

 Page : Bernard Culmer.
 Palmer : Alfred George Benjamin.
 Palmer : Arthur.
 Palmer : Frederick Charles.
 Panario : Francis Michael.

LONDON—continued

Professional Associates :—

Paramor : William.
 Parker : Archie Montgomery.
 Parker : Frederic William.
 Parker : John
 Parnacott : Arthur Charles.
 Parratt : Albert Martin.
 Parratt : Oswald Estcott.
 Paul : Francis.
 Paul : John William.
 Pearce : Charles Frederick.
 Pearce : Frederick William.
 Pearce : Stephen Harvey.
 Pearce : Douglas Davison.
 Pemberton : Percy Leigh.
 Perks : Sydney, F.R.I.B.A.
 Perry : Charles William.
 Petrie : Alan Roy.
 Pewtress : Herbert Wilmshurst.
 Pilbeam : Francis Newcastle.
 Pinfold : Francis Arthur.
 Pitt : Joseph Henry.
 Pitts : Frank Ernest.
 Plumstead : Henry William Lewis.
 Polley : Gordon.
 Pollock-Hodsoll : Harold Edward.
 Porter : Evelyn de Bock.
 Porter : Sydney Lawrance.
 Potter : Edward.
 Pottier : Alfred.
 Power : Richard Reilly.
 Price : Capel Hereward.
 Price : Robert Henry, M.R.A.C.
 Price : William Harry Lyne.
 Pusser : Daniel Robert.

Quarmby : Charles David.

Radburn : Sydney Charles.
 Rand : John.
 Ransom : Thomas Reginald.
 Ratcliff : Sidney Arthur.
 Raymond : Walter Leslie.
 Reavell : Charles Asquith.
 Rees : William Harold.
 Rice : Edward.
 Richards : Arthur Walter Trollope.
 Richardson : Ernest Edward.
 Richardson : William Edward.
 Riddett : Basil Perry.
 Rider : Sydney Franklin.
 Ringland : William Ewart.
 Rippon : Herbert.
 Roberts : Charles Minto.
 Robertson : Henry Charles.

Professional Associates :—

Robinson : Harold Layton.
 Robinson : Leslie.
 Rogers : Edgar Arthur.
 Rogers : Montagu Stanley.
 Rolfe : Charles Bertram.
 Ronald : Thomas Rowan.
 Roper : John William.
 Rosevear : John Ashburnham.
 Rowe : Gilbert Charles.
 Ruault : Claude Edwyn.
 Rubinstein : Isaac.
 Ruddle : George William.
 Russell : Humphrey Gladstone.
 Rutter : Vallancey Arthur.
 Ryde : Edward Humphrey Noel.
 Ryde : John Titcomb.
 Sackett : Sidney Rupert.
 Sainsbury : William Charles.
 St. Quintin : Clifford Jack.
 Salmon : Joseph Harold
 Salter : William.
 Sanders : John Robert.
 Sands : Hubert Covell.
 Sargent : Frank Ellison.
 Satchell : Herbert Arnold, F.R.I.B.A.
 Saunders : Edgar Walter.
 Saward : Sidney Carman.
 Sayer : Harvey Robert.
 Scantlebury : William Seth.
 Sceats : Douglas Briant.
 Schroeder : Edward.
 Seoble : Herbert Thomas.
 Scott : Leslie.
 Scriven : John Pearce.
 Scrivener : John Charles.
 Sedgwick : Percy George.
 Selby : Frank.
 Seller : Frank Russell.
 Sewell : Frank Hersey
 Shephard : Joseph Ernest.
 Sherry : Nathaniel.
 Sherwin : Cyril Joseph.
 Sherwin : Henry Edward.
 Sheppard : John Mortimer.
 Shipwright : William George.
 Short : John Rodwell.
 Sich : Percy Bertram Wardell.
 Sims : Nugent Woolcott.
 Skelt : Frederick Mitchell.
 Skeen : Ernest Alexander.
 Skingle : Alfred.
 Skingle : Alfred Charles.
 Skitt : Arthur Howard Wakem.
 Smalley : William.
 Smith : Arthur Kitson.

LONDON—*continued**Professional Associates :—*

Smith : Franklin.
 Smith : George Henry.
 Smith : John Harold.
 Smith : Sidney.
 Sneath : Frank Edgar.
 Soanes : Charles Freeborough.
 Spencer : Francis Augustus.
 Spooner : Herbert John.
 Spyer : George.
 Stapleton : George Aubrey.
 Stedeford : John Britton.
 Stephenson : James Keppel.
 Stevens : Lewis John.
 Stevens : Nicholas Richard.
 Stevens : William Frederick Hood.
 Stevenson : Frederick J.
 Stiles : Herbert.
 Stimson : Douglas Cecil.
 Stimson : Edward Frederick.
 Stimson : Herbert Percy.
 Stokes : Hugh Charles.
 Stoneham : Frederic Martyn.
 Stower : Joseph.
 Strachan : Robert Gordon.
 Stroud : Albert William.
 Stubbing : Richard Webb.
 Sturgess : John Moore.
 Sturt : Leslie.
 Summerfield : Joseph Charles.
 Sunderland : Amos.
 Surrey : Christopher William.
 Swain : George Henry.
 Swan : Harold.
 Symes : James Gordon.
 Symes : William Charles.

Taylor : Alfred Cecil.
 Taylor : David Henry.
 Taylor : Frederick Hale.
 Taylor : Herbert William.
 Taylor : John Francis White.
 Taylor : John Henley.
 Taylor : Thomas Osborne.
 Taylor : Walter Floyd.
 Taylor : William Graham.
 Terry : Frank Treacher.
 Thake : Robert Frederick William.
 Thoburn : Hugh Forsyth.
 Thomas : Alfred William.
 Thomerson : Albert.
 Thompson : Alfred Alexander.
 Thompson : Arnold John.
 Thompson : Joseph Atherden.
 Thompson : Roland O'Brien.
 Thomson : Herbert David.
 Thornley : Harold Victor.
 Thurgood : Leonard Fielder.
 Thynne : Reginald Lambert.
 Tickle : Arthur George Warnham.

Professional Associates :—

Tidey : Herbert Gordon.
 Titterton : Sydney George P.
 Tivendale : Thomas.
 Tobias : Maurice.
 Toley : Ernest Albert.
 Tomkins : Samuel Edward.
 Tomlin : Francis Ferrier.
 Townsend : Edward Aldridge.
 Townsend : George James.
 Trafford : Francis Noel.
 Trollope : Francis Henry Moore.
 Trollope : Robert John.
 Trowbridge : Frank William.
 Turner : Arthur.
 Turner : Henry Charles Pettit.
 Tyler : William Bott.
 Tyser : Grafton Leslie.
 Tyson : George Alfred.

Ulyett : Leslie George Stanton.

Veit : Leonard James.
 Venning : Harry John, A.R.I.B.A.
 Verity : Ernest George.
 Vigers : Geoffrey Leslie.
 Vine : Wilfrid Gordon.
 Vining : Eric Leslie Randall.

Wade : Reginald Sidney.
 Walker : Cyril Herbert.
 Walker : William Selves.
 Walsh : Frederick William.
 Watson : Charles Havers.
 Watson : William James.
 Watts : Ernest William.
 Watts : Frederick Spring.
 Watts : Graham Reginald Garner.
 Weaver : Lionel Hunter.
 Webster : Frederick Annesley Michael.
 Wellings : Charles Henry Clifford.
 Wheeler : Welby.
 Whiddington : Stanley Dunford.
 White : Alfred Llewellyn.
 Whitehead : Ernest Mortimer.
 Whiteley : Cyprrian Charles Oswald.
 Whittington-Cooper : Alfred.
 Wilde : Sidney Algernon.
 Wilkes : George Thomas.
 Wilks : Clement.
 Williams : Peter Lloyd Armstrong.
 Willmott : Arthur Stanley.
 Willmott : James Perceval.
 Willoughby : Charles Albert.
 Willoughby : Charles William.
 Wilson : Everard John.
 Wilson : John Hayes.

LONDON—continued

Professional Associates :—

Wonnacott : Howard John
Wood : Albert Frederick.
Worth : George Pearce.
Wraight : George Frederick Harold.
Wright : William Newcome.
Wykes : Herbert Ivie.

Yates : Hubert.
Young : Archibald Ford.
Young : Gordon Casson.
Young : Herbert Henry.

Associates :—

Allan : Charles Edward.
Alverstone : The Right. Hon. Lord,
G.C.M.G., Lord Chief Justice of
England,

Associate of Council.

Barnes : George Frederick.
Barry : Charles Edward.
Barry : Sir John Wolfe, K.C.B.,
M.I.C.E.,

Associate of Council.

Beale : James Samuel.
Beale : John Field.
Beale : Sydney William Phipson.
Bellewes : George Oliver.
Berkeley : Rowland Thomas Mortimer,
B.A. (Cantab.)
Bidder : Harold Francis, B.A.
Bund : John W. Willis.

Castle : Edward James, K.C.
Clarke : Sir Ernest.
Clode : Walter.
Colam : Robert Frederick.
Courthope-Munroe : Harry, M.A.
(Cantab.)
Coward : John Charles Lewis, K.C.
Cripps : Sir Alfred Charles, K.C.V.O.,
K.C., M.P.

Danckwerts : William Otto Adolph
Julius, K.C.
Dibdin : Lewis George.

Associates :—

Fletcher-Moulton : Hugh Lawrence.
Freeman : George Mallows, K.C.
Freshfield : Edwin.

Graham : William Vaux, M.I.C.E.
Grantham : Richard Fuge, M.I.C.E.
Grantham : William Wilson.
Gregory : Henry Holman, K.C.
Gwyer : Maurice Lenford.

Harper : Richard Williamson.
Houghton : George Boydell.
Howes : Arthur Burnaby.
Hudson : Alfred Arthur, K.C.
Hutchinson : Christopher Clarke, K.C.

Jeeves : William John.

Leworthy : John Henry.

Mence : Phillip Allan.
Moon : Ernest Robert, K.C.
Mould : Graham Harley.

Page : Ernest, K.C.
Pain : Arthur Cadlick, M.I.C.E.
Pinches : Edward Edwin.

Redman : Joseph Haworth.
Rickards : Arthur George, K.C., M.A.
(Oxon.)
Rigg : Herbert Addington.
Russell : Charles Alfred, K.C.

Statham : William Arnold.
Stephens : Pembroke S., K.C.
Stutfield : Alfred Robert Ogilvie.

Terry : George Percy Warner.
Thorne : Richard Squire, B.A.
(Cantab.)

Walsh : Cecil Henry.

Colonial Fellows :—

Anderson : Henry, A.M.I.C.E.
Carpmael : Harold.
Collins : Horace.
Sanders : Francis Leonard.

COLONIES AND FOREIGN COUNTRIES.

AFRICA.

BRITISH EAST AFRICA.

TANA VALLEY.

Professional Associate :—

Rule : Thomas.

NAIROBI.

Professional Associate :—

Lynde : Walter Mignells.

Colonial Fellow :—

Tanner : William Hugh.

CAPE COLONY.

CAPE TOWN.

Fellow :—

Sladdin : Frederick Robert Edwin.

Professional Associates :—

Irvine : Archibald Wyndham.

Labdon : Herbert George.

KNIGHTS.

Professional Associate :—

Perkin, Daniel Ward.

PORT ELIZABETH.

Professional Associate :—

Sale : Arthur Reed.

SIMONSTOWN.

Fellow :—

Baker : Ernest John.

WOODSTOCK.

Professional Associate :—

Menmuir : Robert William.

EGYPT.

ALEXANDRIA.

Professional Associate :—

McKinstry : Arthur Douglas.

CAIRO.

Professional Associates :—

Clark : Raymund Montague.

Skeffington : Thomas Ashford.

KHARABA.

Professional Associate :—

Kerr : Norman Munro.

RAS-EL-KHALIG.

Fellow :—

Hood : Thomas, Jun.

Professional Associates :—

Wadman : Albert John.

Yelf : Jack Robert.

TOR.

Professional Associate :—

Speakman : John McClure.

MAURITIUS.

Fellows :—

Chapman : George James, Capt.

Coad : Harold Eustace.

NATAL.

PIETERMARITZBURG.

Colonial Fellow :—

Osbourne : Edward.

NYASSALAND.

CHOLO.

Professional Associate :—

Vaughan : Arthur Herbert.

ZOMBA.

Professional Associate :—

McCall : Jacobus Stewart Johnson.

Colonial Fellow :—

Firr : Thomas Freeman.

ORANGE RIVER COLONY.

BLOEMFONTEIN.

Professional Associates :—

Stucké : William Henry, A.R.I.B.A.

Wallace : Herbert Alexander Craig.

RHODESIA.

BULAWAYO.

Professional Associate :—

Youatt : Ernest.

SALISBURY.

Professional Associate :—

Mundy : Hugh Algernon Godfrey.

TRANSVAAL.

JOHANNESBURG.

Professional Associates :—

Browne : Eustace Montague.

Covernton : Christopher Alan.

English : Henry Cecil.

Stucké : William Henry, A.R.I.B.A.

Colonial Fellow :—

Stokes : Frederick Vincent.

PRETORIA.

Professional Associates :—

Hickman : Frank Davis.

Howgrave-Graham : George Ernest.

Colonial Fellow :—

Bell-John : Harry.

ROBERTS HEIGHTS.

Fellow :—

Knight : Henry St. John, Captain.

COLONIES AND FOREIGN COUNTRIES—continued.

UGANDA.

UGANDA.

Colonial Fellow :—
Allen : Raymond Cecil.

WEST COAST.

GOLD COAST.

Colonial Fellow :—
Palk : David Smith.

LAGOS.

Professional Associate :—
Slatter : Arthur Whittard.

SIERRA LEONE.

Professional Associates :—
Bradshaw : Arthur Stanley.
Scotland : Douglas William.

AMERICA (CENTRAL).

BRITISH HONDURAS.

Colonial Fellow :—
Usher : Charles Richard.

WEST INDIES.

BAHAMAS.

Colonial Fellow :—
Miller : William.

BARBADOES.

Colonial Fellow :—
Bowen : Ernest Francis Sinderby.

BERMUDAS.

Fellow :—
Taylor : Edgar Charles, Capt.

DOMINICA.

Professional Associate :—
Skeat : Arthur Percival.

JAMAICA.

Professional Associate :—
Hollis : Herbert.
Colonial Fellows :—
Abrahams : Charles Victor.
Baker : William Anthony.
Bancroft : Augustus Charles.
Dodd : John Hugh.
Foster : Edward.
McGahan : Amos Harvey

TRINIDAD.

Professional Associate :—
Prevatt : Francis Christophe.

TURK ISLANDS.

Colonial Fellow :—
Reid : Edward George.

WINDWARD ISLANDS.

Colonial Fellow :—
Osment : Harry Shorthose.

AMERICA (NORTH).

CANADA.

ALBERTA.

Professional Associates :—
Heard : Robert Charles.
Pearman : Francis May.
Colonial Fellows :—
Chattell : Arthur Paul.
Heathcott : Robert Vernon.
Lines : Roland Walter.
Sanders : Francis Leonard.
Underwood : Edward.

ASSINIBOIA.

Professional Associate :—
Parker : Howard.

BRITISH COLUMBIA.

Professional Associates :—
Blackman : John William Bernard,
A.M. Can. Soc. C.E.
Duggan : Creighton Edward.
Foster : William Howard.
Jeffery : Charles John.
Mitchell : Archibald Francis.
Simpson : Christopher.
Wetenhall : Edward Box, A.R.I.B.A.
Colonial Fellow :—
Noakes : Arthur Orwhyn.

LENNOXVILLE.

Professional Associate :—
Smith : Stephen Percy, B.A. (Oxon),
Dip. Ag. Camb.

MONTREAL.

Professional Associates :—
Allen : Newstead Adams.
Chipp : George.

ONTARIO.

Professional Associate :—
Percival : Alexander William.

OTTAWA.

Professional Associates :—
Ashton : Arthur Ward.
Clunn : Thomas Henry Gwyther.

REGINA.

Professional Associate :—
Genders : Percy Robert.
Colonial Fellow :—
Clarke : Charles Wentworth.

SASKATOON.

Professional Associate :—
Woodcock : Frank Sydney.

TORONTO.

Professional Associates :—
Emslie : Benjamin Leslie.
Le May : Tracey Deavin

WINNIPEG.

Professional Associates :—
Bloor : Richard Ashton.
Walkden : William.

COLONIES AND FOREIGN COUNTRIES—continued.

UNITED STATES.

CALIFORNIA.

Professional Associate:
Greenfield: Frederick James.

Colonial Fellow:—
Burchell: Sidney Herbert.

COLORADO SPRINGS.

Colonial Fellow:
Whitaker: Ernest Victor.

MONTANA.

Professional Associate:—
Harvey: William Rhys.

NEW JERSEY.

Professional Associates:—
Baines: William Henry.
Travers: Charles Arthur.

AMERICA (SOUTH).

ARGENTINE REPUBLIC.

BUENOS AIRES.

Fellow:—
Wells: Frederick Beauchamp.

Professional Associates:—
Blencowe: Sydney.
Dyke: Harold George.
Fitch: Philip.
Lorimer: Gordon.
Waugh: Reginald Robert.
Williams: William Henry.
Colonial Fellow:—
Griffiths: Owen.

BOLIVIA.

LA PAZ.

Professional Associate:—
Stockings: Arthur Perry.

BRAZIL.

ESTADO DE MINAS.

Professional Associate:—
Nottage: Percy George.

CHILI.

ARICA.

Professional Associate:—
Amies: Herbert Christopher.

SANTIAGO.

Colonial Fellow:—
Leane: Walter Burditt, A.M.I.C.E.

ASIA.

BURMA.

RANGOON.

Fellow:—
Clancey: John Charles, K.I.H.

CEYLON.

BADULLA.

Professional Associate:—
Manson: Edward Beresford.

COLOMBO.

Fellow:—
Boxshall: Major Henry Edwin.
Professional Associates:—
Baker: Frank Leslie.
Bartholomew: Eugene Wycliffe.
Bloxham: Douglas.
Coventry: Bernard Seton.
Harrison: Hamilton Payn.
Lees: Henry Berry.
Loram: John Anning.
Nettelton: Oscar Traves.
Stephenson: Chambré Corcor
Stillington.
Vince: Clement Harwood.
Colonial Fellows:—
Gill: James Herbert Wainwright.
May: Philip John.

CHINA.

CANTON.

Colonial Fellow:—
Chye: Tian Fook.

HONG KONG.

Professional Associates:—
Lowick: Henry Capell.
Newhouse: Edward.
Reed: Edward B.
West: Harold.
Wilson: George Leopold.
Colonial Fellow:—
Watkins: Harry.

SHANGHAI.

Fellows:—
Peebles: Philip.
Simpson: Cecil John William.
Sparke: Norman Lush.
Professional Associate:—
Halse: Sidney Joseph.
Colonial Fellow:—
Godfrey: Charles Henry, A.M.I.C.E.

EAST INDIES.

BORNEO.

Professional Associate:—
Ermen: Cuthbert Emil Albert.

INDIA.

AGRA AND OUDH.

Fellow:—
Jackson: Henry.

BELGAUM.

Colonial Fellow:—
Cooper: Joseph A. W., A.M.I.M.E.

BENGAL.

Professional Associates:—
Goodwin: Percy Worthington.
Kingsford: Geoffry Neville.

COLONIES AND FOREIGN COUNTRIES—continued.

INDIA—continued.

BOMBAY.

Fellows :—

Delves : Robert Harvey Addington.

Fritchley : Edwin Wollaston.

Associate :—

Cardale : William Henry.

CHAHARDHARPUR.

Colonial Fellow :—

Burstal : Arthur Cyril.

HOWRAH.

Colonial Fellow :—

Cuerden : Frederick James.

KASHMIR.

Professional Associate :—

Sharma : Lakshmi Chand.

LURJAPUR.

Professional Associate :—

Amoore : Henry James.

NAGPUR.

Professional Associate :—

Main : Thomas Forster.

PUNJAUB.

Fellow :

McIntosh : Richard.

Professional Associate :—

Dudley : Roland.

ROORKEE.

Colonial Fellow :—

Gurney : James Stratton.

SONADA.

Professional Associate :—

Steward : Ernest Alexander.

JOHORE.

Fellow :—

Lermit : Alfred William.

Colonial Fellow :—

Lermit : Arthur Alfred.

MALAY STATES.

KUALA LUMPUR.

Colonial Fellow :—

Edwardes : William Arnold Donaldson.

NEGRI SEMBILAN.

Fellow :—

Walker : James William Boyd.

Professional Associate :—

Tayler : Vivian Alfred.

PERAK.

Professional Associate :—

Walton : Edgar Thomas.

SIAM.

BANGKOK.

Colonial Fellows :—

Gairdner : Kenneth Graeme.

Michell : John.

STRAITS SETTLEMENTS.

PENANG.

Professional Associate :—

Neubronner : Harry Alfred, A.R.I.B.A.

SINGAPORE.

Professional Associate :—

Cramphorn : Charles Hubert.

Colonial Fellow :—

Coghlan : Henry Lake.

AUSTRALASIA.

AUSTRALIA.

MELBOURNE.

Colonial Fellow :—

Tuxen : Peter Vilhelm.

PERTH.

Professional Associate :—

Grover : Luke Montagu.

SYDNEY.

Professional Associate :—

Vigars : John William.

FIJI.

Professional Associate :

Hervey : Thomas Percy Arthur.

TASMANIA.

BURNIE.

Professional Associate :—

McGaw : Andrew Kidd.

EUROPE.

GIBRALTAR.

Professional Associate :—

Turner : Jabez Tennyson.

ITALY.

NAPLES.

Professional Associate :—

Scott : Walter Fenimore Vaughan.

MALTA.

Fellows :—

Bettridge : John Charles Lebon.

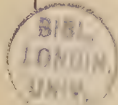
Bryant : George Herbert, Capt.

RUSSIA.

BATOU.

Professional Associate :—

Lister : Ernest Edward.



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